

# Turnaway Study Report Unethically Violated Participants' Privacy and Misleads Public with a Non-Representative Sample, Selective Reporting, and Overstated Conclusions

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## **Abstract**

Results from the Turnaway Study have widely been represented as definitive proof that women denied access to abortion will suffer severe injury to their health and economic wellbeing. Yet a careful examination reveals that the study is based on a non-random, non-representative sample of women that grossly underrepresents the experiences of most women undergoing abortions. Additionally, reanalysis reveals that the effect size of its reported outcomes observed have been grossly overstated. There is also selective reporting and misrepresentation of results previously published. Inconsistencies also suggest the credit history reports of the Turnaway Study participants were obtained without their informed consent.

## Turnaway Study Report Unethically Violated Participants' Privacy and Misleads Public with a Non-Representative Sample, Selective Reporting, and Overstated Conclusions

Advancing New Standards in Reproductive Health's (ANSIRH) Turnaway Study, led by Diana Greene Foster, has resulted in more than fifty peer reviewed studies (Foster 2020). With a well-funded public relations department, many of those studies have captured national headlines (Reardon 2018a) and have been widely cited in legislative hearings and court cases relevant to abortion laws (Shutt 2024; Douglis 2022; Lenharo 2021). One of the most recent Turnaway Study reports was published in the *American Economic Journal: Economic Policy* and concludes, per the abstract, that “women who were denied an abortion experience a large increase in financial distress that remains for years” (Miller, Wherry, and Foster 2023).

In this critique, I argue that this conclusion relies on unreliable data, is overstated, and was based on human data collected without the informed consent of the persons being studied.

To provide context to this critique, it is notable that ANSIRH provides abortion advocacy and training (S Goodman, Wolfe, and Group 2012). It was founded by Tracey Weitz (ANSIRH, n.d.) who also directs the Susan Thompson Buffett Foundation's population control efforts (Callahan 2014). Warren Buffett is known to have a “Malthusian dread” of population growth (Philanthropy Roundtable 2023; Weise 2015), a concern which is shared by other foundations which also support ANSIRH (Martin 2016; Harlow 2009; Ludwig 2020) and that are also investors in the testing, manufacture and

distribution of the abortion drug, mifepristone, also known as RU-486 (Novielli 2019; Levintova 2023).

In short, ANSIRH’s staff and their funding partners do not approach abortion research from a neutral perspective. Indeed, it is likely their individual and organizational desires to increase abortion access and abortion rates in “underserved” communities have contributed to the inconsistencies, misrepresentations, overstatements, and other lapses discussed below.

It is also notable that ANSIRH along with other abortion advocates have called for the retraction of studies that have reported negative effects associated with abortion which they have described as being “unreliable” (Littell et al. 2024). They have insisted that any research touching on public policy regarding abortion that “cannot be relied upon” should be retracted, noting: “We must maintain uncompromising standards of quality and integrity at every stage in the production and dissemination of scientific research.... Allowing inaccurate information to remain in the scientific record can have lasting and deleterious effects on law, public policy, clinical practice, and public health” (Littell et al. 2024). Surely, the same standards for quality and integrity should also apply to studies published by abortion advocates.

This critique of the Turnaway Study in general, and their credit history analysis in particular, is formulated around the same standards ANSIRH has used to call for the retraction of other papers.

### **The Turnaway Study sample is not representative**

In short, the Turnaway Study is based on a non-random, non-representative sample (Reardon 2018a). The sampling flaws are so serious that none of the results from any of the studies can be relied upon for drawing substantive

conclusions about the general population.

**The invitation process was not random and required exclusion of women at higher risk of negative reactions**

The Turnaway Study utilized a convenience sample drawn disproportionately from 30 different abortion clinics. The invitation process was not random. Staff were told to exclude women who were seeking abortions for therapeutic reasons, such as fetal anomalies (Foster 2020), a group known to have more negative reactions to their abortions (Reardon 2018b). This methodological exclusion makes the sample unrepresentative of the general population.

In addition, clinic staff were free to exercise their own judgment on when to invite patients to participate with some staff inviting less than 20% of eligible patients while others invited 70% to 100% (Dobkin et al. 2014). This lack of a random invitation process, alone, prevents any results from being applied to the general population of women who have had, or have sought, abortions.

**Sample quality was diminished by a low participation rate and self-censure**

Of 3,045 women invited to participate, only 1,132 (37.2%) agreed to participate. Normally, such a low participation rate would often result in automatic rejection of studies by many journals. For example, the journal *Obstetrics & Gynecology* requires a minimum response rate of 60% or higher (“Instructions for Authors” 2019).

But this low participation rate was even further damaged by a 15.5% dropout among those who had agreed to be interviewed during the seven to eight days prior to their first interview. This dropped the actual participation rate (completion of at least one interview) to 31% (Reardon 2018a).

In any context, a mere 31% participation rate introduces an overwhelming probability of self-selection bias. This is even more true when the subject matter is one's recent abortion, where it is well established that abortion patients who anticipate the most post-abortion distress are least likely to agree to post-abortion interviews (Söderberg et al. 1998; Adler 1976; Reardon 2018b). This effectively results in self-censure, the omission of data representing an important subgroup of the target population.

In an effort to deflect criticism of their low participation rate 31%, ANSRIH has asserted low participation rates are common for post-abortion survey studies initiated at abortion clinics (Foster 2020). But a similarity to other poor studies does not convert a poor study into a good study. Similarly, ANSRIH has claimed their study compares well (A. Biggs et al. 2022) to the attrition rate reported in the Nurse's Health studies (Bao et al. 2016). But while a 5% attrition rate every six months is not unprecedented, the original Nurse's Health Study had a 71.2% participation rate (Bao et al. 2016), not a mere 31%. Plus, the participants in the Nurse's Health Study were not incentivized with \$50 gift cards. So ANSRIH's claim that the Turnaway Study participation rates are similar to the Nurse's Health Study lacks any merit.

In fact, the Turnaway Study's low participation rate does not even fare well in comparison to other ANSRIH abortion clinic sponsored studies. In another ANSRIH study collecting data during pre-abortion interviews, 72% of women invited to participate did so (M. A. Biggs et al. 2020), well over twice the Turnaway Study participation rate. This higher rate was most likely due to the women not being asked to participate in a *post-abortion* interview.

### **The sample underrepresents women who experienced pressure to abort**

Women who feel pressured to abort contrary to their own values and

preferences are significantly more likely to attribute negative emotional and psychological reactions to their abortions (Rue et al. 2004; Reardon and Longbons 2023; Reardon, Rafferty, and Longbons 2023; Reardon 2024b).

One retrospective study of patients at health care facilities found that 64% of women with a history of abortion reported being pressured to choose abortion by others (Rue et al. 2004). Another study of a national population of women 41-45 years of age, part of the Unwanted Abortion Studies, found that 61% of those with a history of abortion reported high levels of pressure to abort and that pressure to abort was strongly correlated to undergoing an abortion contrary to the woman's own moral beliefs or maternal desires, more negative than positive emotions, and a decline in overall mental health (Reardon and Longbons 2023). Pressure to abort was also associated with feeling greater stress in completing a post-abortion survey (Reardon and Longbons 2023). In sharp contrast to the above studies, only 1.2% of the aborting women in the Turnaway Study reported feeling pressure from others (M. A. Biggs, Gould, and Foster 2013). This suggests that the Turnaway Study's sample severely underrepresents the majority of abortion patients who do report external pressures to choose abortion.

Further confirmation of the non-representative nature of ANSIRH's sample is found in the Unwanted Abortions Studies' retest of one of the Turnaway Study's key variables, "decision rightness." Using a 101-point scale for measuring decision rightness, instead of the yes or no measure employed in the Turnaway Study, the Unwanted Abortions Studies' analyses revealed that the Turnaway Study's results regarding decision rightness most closely align with only the 33% of women who describe their abortions as freely desired and consistent with their own values and preferences (Reardon, Rafferty, and Longbons 2023). All the other groups, who reported pressure to abort contrary

to their own preferences, reported less “decision rightness” and higher rates of negative effects. Notably, the value of 33% describing the women who freely chose their abortions is nearly identical to the 31% of women who participated in the Turnaway Study. These findings indicate that the Turnaway Study most likely overrepresents a specific minority of women seeking abortions.

Notably, the Unwanted Abortion Studies had a 91% completion rate, and the percentage of women admitting to a history of abortion (22.6%) matched the Guttmacher Institute’s estimate for lifetime incidence rates (Jones and Jerman 2017). This suggests that the survey methodology employed in the Unwanted Abortion Studies, which was designed to lower fears of judgment before asking women to reveal their abortion histories (Reardon 2024b), was more likely to be acceptable to a more representative sample of the national population of women who have had abortions, especially in comparison to the Turnaway Study sample.

### **ANSIRH own attrition analyses confirms that that there is Turnaway Study sample bias**

As previously mentioned, approximately 50% of Turnaway Study respondents dropped out over the course of the five-year biannual interviews. Notably, the dropout rate was higher among women who reported less relief and happiness at the baseline interview which occurred one week after recruitment at the abortion clinic (Rocca et al. 2015). This is consistent with the expectation that women who have more negative feelings and more stress when responding to questions about their abortions are the most likely to opt out.

In yet another Turnaway Study report examining suicidal ideation and thirteen covariates, ANSIRH reported that three of the thirteen covariates were not associated with attrition (M. A. Biggs et al. 2018), indicating that the other ten

covariates and suicidal ideation itself *were* (Reardon 2024a).

### **Turnaway Study incentives may have biased sample toward lower income women**

Turnaway Study participation rates were even lower prior to the introduction of \$50 gift cards provided to women each time they participated in an interview, a practice which tripled participation rates (Dobkin et al. 2014). This incentive may have disproportionately induced participation among lower income women for whom \$50 was a significant reward. In contrast, the Unwanted Abortions Studies were conducted at a cost of less than \$4 per completed interview paid to the electronic survey distributor, with only a portion of that amount provided as an incentive to participants (Reardon and Longbons 2023; Reardon 2024b).

### **The Turnaway Study inappropriately mixed groups that obfuscates findings**

Conceptually, the Turnaway Study is portrayed as an examination of the effects associated with having an abortion or not having an abortion. Specifically, the 1,132 women who initially consented to participate were divided into groups: 304 women who aborted in the first trimester (the Early Abortion Group), 536 women who aborted within two weeks of the gestational limits (the Near Limit Group), and 262 women who were denied abortions because their pregnancies were beyond gestational limits (the Turnaway Group) (Miller, Wherry, and Foster 2023). The dropout rate prior to the first interview one week later was significantly different between groups: 10%, 16% and 21% for the Early Abortion Group, Near Limit Group, and Turnaway Group, respectively (M. A. Biggs et al. 2017). Another 14 women



in the Turnaway Group dropped out after the one-week interview, so the outcome of their pregnancies is unknown (Miller, Wherry, and Foster 2023).

### **Reproductive histories were not adequately segregated**

Instead of limiting ANSIRH's credit history study to women with known pregnancy outcomes, the authors inexplicably chose to mix women who had delayed abortions and women who carried to term and women who had natural losses into a single Turnaway Group (Miller, Wherry, and Foster 2023). ANSIRH has acknowledged that at least 50 women in the Turnaway group with known pregnancy outcomes either had late term abortions elsewhere or natural losses, though they have withheld information about how many had which kind of loss. This admixture of women who carried to term and women who had abortions is both unnecessary and inappropriate. It makes it impossible to separate the effects associated with abortion from the effects associated with carrying a pregnancy to term.

In addition, the Turnaway Group is further adulterated by including women with prior and subsequent abortions in it. ANSRIH has elsewhere revealed that 40% of the Turnaway group had prior histories of abortion (Rocca et al. 2013). In addition, given the high rate of rapid repeat abortions reported elsewhere (Studnicki et al. 2020; Reardon and Craver 2021), it is likely that at least some women had one or more abortions during the five-year period following the index pregnancy. As a result, ANSIRH's Turnaway Study analyses are actually comparing two groups of women who are known to have had abortions (Early Abortion Group and Near Limit Group) to an admixture of women *with and without* a history of induced abortions (the Turnaway Group). This inappropriate admixture makes it impossible to separate any effects associated with having an abortion and not having an abortion.

Women with a history of abortion have higher rates of mental health issues (Studnicki et al. 2023; Reardon 2015; 2018b; Sullins 2016) and remain on public assistance longer (Studnicki et al. 2021; Strahan 1995). These issues may make it more difficult for these women to maintain relationships and/or advance their economic well-being. Therefore, if the women in the Turnaway Group who obtained delayed abortions elsewhere had disproportionately more economic differences than women who carried to term, ANSIRH's blending of these two distinct groups (Miller, Wherry, and Foster 2023) may lead to a misattribution of negative effects associated with abortion to the group of women who did not have abortions.

Obviously, a better study design would have been to simply exclude or segregate women with prior or subsequent abortion histories from their analyses. Indeed, this option is so obvious that it is impossible for ANSIRH researchers to have missed it. If women who carried to term who had no history of abortion suffered significant economic disadvantages compared to women who had abortions, that finding would have more clearly strengthened their hypothesis that abortion benefits women's economic wellbeing.

But instead, they chose to report results based on an inappropriate admixture of women with and without a history of abortion. This raises the suspicion that they were seeking results which could be portrayed as demonstrating economic harm to the women who carried to term even though an actual analysis of that subgroup, which was withheld from publication, did not support that assertion.

### **Gestational ages are inappropriately mixed, obscuring results**

In ANSIRH's credit history study, the authors conclude that "Our study indicates that laws that impose gestational limits for abortion result in worse

financial and economic outcomes for the women who are denied an abortion” (Miller, Wherry, and Foster 2023). This conclusion is not supported by their data and thereby violates STROBE guidelines (Cuschieri 2019).

In fact, the authors’ elsewhere reveal that “many in the Turnaway group are denied abortions at a gestational age lower than what is legally allowed” (Miller, Wherry, and Foster 2023, 405). Indeed, examination of their provided “histogram of gestational age at time of abortion receipt or denial” (Figure 1) reveals that 10% of the Turnaway Group were turned away at or before 12 weeks gestation, 22% were turned away at or before 18 weeks of gestation, and 55% were turned away prior to or during the 24<sup>th</sup> week of gestation. Thus, over 50% of patients were turned away for *medical reasons*, not legal reasons. During the time the Turnaway Study participants were recruited, *Roe v Wade* prohibited any restrictions prior to 24-weeks of gestation that were not strictly directed to protecting women’s health. At the same time, most abortion providers have the right and duty to refuse to do abortions that are contraindicated by important medical reasons, such as concurrent raging infections, coercion, intoxication, or an inability to treat complications associated with later term abortions (Baker 1999; Baker and Beresford 2009).

Clearly, ANSIRH could have analyzed their data using only the subset of women who were turned away due to legal restrictions on late term abortions. But they chose not to. That decision eviscerates the value of any of their published findings being applicable to effects associated with laws regulating gestational age limits.

### **Summary statements regarding other findings are misleading**

ANSIRH’s decision to blend those who aborted elsewhere with those who

carried to term under the same label, the Turnaway Group, has hidden significant differences between these two distinctly different groups. For example, in their credit history analysis (Miller, Wherry, and Foster 2023, 403) the authors mislead readers on page 403 when they state: “This body of work [the Turnaway Study] finds that women who were turned away by the abortion clinics experienced worse mental health in the short run (Biggs et al. 2017).” This statement falsely suggests that all women turned away by abortion clinics, on average, experienced adverse mental health effects, at least in the short term. But in fact, a closer reading of the cited reference reveals that there were no differences beyond one week and the differences observed at one week were chiefly limited to a continued presence in anxiety among the 50 *women still seeking abortions* (OR=2.29; 95% CI 1.39 to 3.18) (M. A. Biggs et al. 2017). At the same point in time the women who ultimately carried to term actually had *much lower anxiety* scores (OR= 0.57; 95% CI 0.01 to 1.13) compared to all the aborting groups (M. A. Biggs et al. 2017). Arguably, this finding could have been interpreted as a sign improved mental health among women who are “denied an abortion,” provided they do not continue to seek one. Yet this finding is never highlighted.

In another Turnaway Study report ANSIRH revealed that that 16% of the women who had abortions reported at least three symptoms of PTSD, of whom 19% attributed their symptoms to their abortions (M. A. Biggs et al. 2016). This finding was largely ignored by ANSIRH, however, based on their claim that the observed PTSD symptoms were more often attributed to other experiences. But that argument does not diminish the underlying fact that many women reported that their abortion *were* a contributing factor in PTSD symptoms, as is also reported in other studies (Rousset et al. 2011; Rue et al. 2004; Van Rooyenm and Smith 2004) and that abortion, if experienced as a

subsequent stressor, may contribute to and aggravate preexisting PTSD symptoms (Kube, Elssner, and Herzog 2023).

In yet another study ANSIRH revealed that the majority of aborting women in the Turnaway Study reported negative feelings: sadness (64%), guilt (53%), regret (41%), and anger (31%), but in every case these negative emotions were lower among the turnaway group who carried to term (Rocca et al. 2013). In addition, rates of suicidal ideation among the women who had abortions were higher than that of women who carried to term (M. A. Biggs et al. 2018). But the significance of this finding was concealed through an unjustifiably complex multivariate regression (Reardon 2024a).

Typically, ANSRIH has hidden the fact that negative reactions are common behind the single data point claim that “the most common reaction to abortion is relief,” which was reported by 81% of the aborting women included in the Turnaway Study (Rocca et al. 2013). But they fail to mention that their measure of relief encompasses a wide range of meanings. It includes relief that a dreaded medical procedure is over. Relief that one’s partner will stop pressuring for an abortion, and more. In short, nearly all women will experience some form relief when an abortion is over. This is precisely because abortion is almost always both a stress releaser and a stress creator (Speckhard and Rue 1992). It typically exchanges the release of immediate stress for a set of new stressors. This is why positive emotions are almost always concurrent with negative emotions (Reardon et al. 2023; Reardon 2018b). In addition, when women are provided with a wide range of emotions associated with abortion, relief is not even in the top five; by self-reported grading of the most prominent feelings experienced by abortion, guilt, grief, depression, and anxiety are rated more highly than relief (Reardon 2024b).

In summary, readers of the Turnaway Study credit history study were misled

by the statement that the Turnaway Study had already proven that “women who were turned away by the abortion clinics experienced worse mental health in the short run.” This is a distortion of what the body of Turnaway Study papers has actually revealed, and it is in fact limited to the women who had delayed abortions, not the majority for whom the abortion denial was a welcomed reprieve, as will be discussed in the next section.

### “Women who are denied abortions” is misleading

While not revealed in the credit history analysis, the Turnaway Study’s principal investigator has elsewhere admitted that the women in the Turnaway group who carried to term were overwhelmingly happy and relieved not to have had abortions, even as soon as just one week after being turned away (Foster 2020, 121,204). Foster also admits her surprise at being unable to prove there are any mental health harms associated with being denied an abortion, writing: “I expected that raising a child one wasn't planning to have might be associated with depression or anxiety. But this is not what I found over the long run. *Carrying an unwanted pregnancy to term was not associated with mental health harm. Women are resilient to the experience of giving birth following an unwanted pregnancy, at least in terms of their mental health*” (Foster 2020, 109). (Emphasis added)

Considering the aforementioned research, revealing that over 60% of abortions are sought contrary to women’s own preferences (Reardon, Rafferty, and Longbons 2023), it seems likely that the immediate reduction in anxiety experienced by at least some of those who were turned away was because they had been *spared unwanted abortions*.

ANSIRH’s own research reveals that less than 42% of women seeking

abortions characterize their pregnancies as unwanted (M. A. Biggs et al. 2020). For the others, the pregnancy is untimely or even described as wanted. In addition, analyses of the National Longitudinal Study of Adolescent to Adult Health found that 20% of women admitting a history of abortion reported that the aborted pregnancy was wanted (Sullins 2019).

Women who fear being forced into unwanted abortions will often conceal their pregnancies, hoping it “too late” for the abortion when the pregnancy is finally revealed (Burke and Reardon 2007). In any case this may have applied to portion of the Turnaway Group who gave birth, this would explain the high levels of happiness and relief they reported after being spared an unwanted abortion (Foster 2020).

### The study design does not test the underlying hypothesis

The underlying hypothesis of the credit history study is that women compelled to raise unwanted children who might otherwise have been aborted suffer economic hardships (Miller, Wherry, and Foster 2023). But the authors do not investigate, or at least report, on the participant’s initial and transitional assessment of their pregnancies’ “wantedness.” As previously discussed, only a fraction of women seeking an abortion consider their pregnancies to be unwanted (M. A. Biggs et al. 2020; Reardon 2018b; Sullins 2019; Rue et al. 2004). Many feel compelled to submit to unwanted abortions due to external pressures (Burke and Reardon 2007; Reardon and Longbons 2023). Moreover, initially unwanted, unplanned, or untimely pregnancies often quickly transform into *welcomed pregnancies*. This last point is verified by ANSIRH’s own finding, six months after going to the abortion clinic, 88% of the women “denied” an abortion were happy they had not had one, and by the end of the five-year study, only 4% still said they wished they could have had

an abortion (Foster 2020, 204). Indeed, a significant percentage of those who carried to term (estimated to be around 50% or more) reported they were glad they didn't have an abortion at their first interview, one week after being recruited at the abortion clinic (Rocca et al. 2013).

From this perspective, the Turnaway Group who gave birth should really be framed as women who were “spared unwanted abortions” rather than as women who were “denied abortions.” Better yet, the authors could and should have segregated their results between the women who are glad they did not have abortions and those who continued to believe abortion would have been their better option. In short, ANSIRH's credit history study truly tells us nothing about how credit data varied among the 4% in the Turnaway group who *actually felt that they had been denied abortions* that may have made their lives better.

### The study also lacked an appropriate control group

If the goal is to investigate economic markers associated with delivering and raising a child that might have been aborted, comparing the Turnaway Group to women who had abortions is inappropriate.

Clearly, family size impacts financial obligations. The authors observed only a few differences between the credit reports of the Near Limit and Turnaway groups. These mostly had to do with increased debt, which is most likely explained by the fact that the Turnaway group, on average, had more expenses related to having one more child. Therefore, a better designed investigation would have compared the Turnaway birth group to a psychosocial and economically matched control group of women who carried planned pregnancies to term and never considered abortion. That comparison would at



least have helped to isolate effects associated with unplanned pregnancies that are either carried to term or aborted. In contrast, the Turnaway Study design offers no such insights.

**Most of the credit history results were not statistically significant, and gross exaggerations were applied to the few that were**

Despite the claims of the abstract and summary conclusions, a careful reading of the Turnaway Study credit history analyses reveals that most of the metrics investigated did not significantly vary between the study groups (Miller, Wherry, and Foster 2023, 412). Specifically, as seen in Table 2 of the report, ten outcome measures were combined into three summary index scores: debt delinquency, access to credit, and consumer borrowing levels. For two of the three indexes the authors admit that they found no statistically significant differences. But after some manipulation, small, but statistically insignificant, differences were observed in the delinquency index, leading the authors to relabel the “delinquency outcomes” index as the “financial distress” index.

**The authors’ definition of their financial distress index is misleading and double penalized the same debts to inflate statistical differences**

Digging into the details, the authors’ delinquency outcomes / financial distress index was defined as including (1) any elevation in the amount of debt paid to a collection agency, (2) any debt 30 days or more past due, (3) the number of court appearances identified in public records reported to Experian, and (4) the percentage of the group with credit scores below 600 (the threshold for having subprime credit) (Miller, Wherry, and Foster 2023, 410).

The key question this “financial distress” index raises is this: how much confidence can we have in the authors’ assertion that this combination of four

equally weighted metrics are a meaningful measure of financial distress? As argued below, it is my view that this index, both in its development and naming, was nothing more than a post facto construction that is, in fact, a poor measure of financial distress.

The first variable in this index, reports of payments made to collection agencies, is truly a sign of debt. But it may also be a sign of improved financial health if it indicates the payor finally has funds to pay a previously unpaid bill. So, on its own, it is not properly recharacterized as “financial distress.” It is a metric of debt.

The second variable, bills 30 days overdue is also a sign of debt. But it can also reflect disputed payments, forgetfulness, obstinacy, acceptance of debt to be paid over time, or gaming of the system. But whatever the circumstances, it is measure of debt, not necessarily “financial distress.”

The authors’ choices for what should be included in this index really become suspicious when we examine the third variable in their financial distress index: the number of court records associated with each woman. Regarding this variable, the authors admit that Experian doesn’t report any specifics regarding the court cases. But despite that cloud of ignorance they choose to treat it an *equally weighted measure* of “financial distress” because, they argue, some of these cases would include “bankruptcies, tax liens, or evictions” (Miller, Wherry, and Foster 2023, 410). Yet, some of these cases might also include civil suits to collect child support, reimbursements for medical expenses related to childbirth, or any number of other issues. Even more importantly, to the degree the authors are right and some of these cases really are related to financial debts, by including these case counts into a contrived index that *already includes debt collections and past due bills* the authors created an index number that penalizes delinquent payors twice, once

for the collected debt and a second time for its related court case.

Similarly, the fourth index variable, a subprime credit score, is also closely correlated to a history of unpaid debts. So, once again, inclusion of this variable as an equally weighted factor in the four-factor index is repetitive and inflationary. Its inclusion only serves to double penalize women who have a downgraded credit score due to their delinquent debts.

In short, while it may have been reasonable to include the first two elements of debt delinquency (renamed as “financial distress”) into an outstanding debt index, the combination of the four index variables used was duplicative and unwarranted. More importantly, is there any precedent for using these four variables as a measure of financial distress? No. This is simply a label the authors prefer to use because “financial distress” sounds more ominous than “delinquency” much less “increased child related expenses.”

### **Differences in the delinquency index are exaggerated**

Given their disappointment in failing to find any differences in the credit access and borrowing indices, the authors were clearly excited to proclaim that they had found “a *jump* in markers of financial distress in the Turnaway group” (emphasis added) (Miller, Wherry, and Foster 2023, 415). But in fact, the differences between were very small, “about one-tenth of a standard deviation among the Turnaway group in the postperiod” (Miller, Wherry, and Foster 2023, 417). But the smallness of their finding did not stop them from repeating the exaggeration that they had found “*strong evidence* that being denied an abortion had *large effects* on markers of *financial distress*” (emphasis added, pages 420, 429 and in the abstract), claims that are both unwarranted and misleading.

First, as discussed above, the Turnaway Study sample is non-random, non-

representative and tainted by the admixture of women with a history of abortion in both the Near Limits Group and Turnaway Group. Such a convenience sample cannot provide “strong evidence” regarding any generalizable conclusions. Secondly, statistical associations, especially weak ones, are not proof of a direct causal connection. Any differences found cannot be elevated to “strong evidence” simply because differences are statistically significant at a 95% confidence interval. Even in better studies, such differences should only be characterized as “may increase the likelihood of” the observed outcome. Thirdly, the few data points grouped together as “financial distress” are at best markers of debt, not comprehensive measures of “financial distress.” Fourthly, and most importantly, the authors failed to provide an objective measure of effect size that would justify their characterization of the observed differences as being “large effects.”

Specifically, the normal convention for describing the degree of effects is to report the Cohen’s d statistic (the difference between the group means divided by the pooled standard deviation of the two groups). Conventionally, a Cohen’s d value of 0.8 or larger is described as a “large effect” and a value below 0.2 is a “very small effect” (Sullivan and Feinn 2012; Sawilowsky 2009). While the authors of this credit history report chose not to report the Cohen’s d values, we can calculate this measure of effect size using the mean and standard deviations reported in Table 2 and the group sizes from Table 1: Near Limit (n=333) and Turnaway (n=150).

*Cohen’s d measure of effect size for the four components of the “financial distress index”*

	<b>Cohen’s d</b>	<b>Conventional description</b>

Collections	0.11	Very small effect
Amount past due	0.07	Very small effect
Public records	0.10	Very small effect
Subprime credit score	0.04	Very small effect

As seen in these calculations, all of the effect sizes should have been classified as “very small.”

The lack of significant differences is also visible in the effect size graphs shown in Figure 3 of the Turnaway Study report. It reveals that the lowest upper limit of the 95% confidence intervals prior to the index pregnancy overlap the lower 95% confidence limit at every time following the index pregnancy. This overlap signifies that the differences *are not statistically significant*, at least at the 95% confidence level.

In summary, while the authors may have had enough statistical power to identify differences in these variables that are statistically associated with “abortion denial,” describing these differences as “strong evidence” of a “very large” effect was grossly misleading.

**The authors’ assessment of financial distress is contradicted by the Turnaway Group’s own self report**

A critical reading of the reported results reveals additional exaggerations and misrepresentations. Specifically, the authors report that the past due debt of the Turnaway group rose by an average of \$1,750 (Miller, Wherry, and Foster 2023, 417). But this should clearly be interpreted in light of the fact that most of these women had more hospital expenses related to childbearing and another child to clothe and feed. Indeed, if the total household debt were

divided by the number of household members, the per person debt might be lower, at least in many cases.

Most importantly, there was no difference between the two groups in regard to women feeling they did not enough money “most of the time.”(Miller, Wherry, and Foster 2023, 427) In other words, according to the Turnaway Group’s own self-assessment, they were not experiencing higher rates of “financial distress,” at least as measured by the metric of feeling a lack of enough money. In addition, as discussed above, the vast majority of the women in the Turnaway Group who gave birth reported they were glad their welcomed child was not aborted (Miller, Wherry, and Foster 2023, 121,204).

Given that context, wouldn’t the increased debt these women faced be more accurately described as simply evidence of an increase in household expenses following the birth of a welcomed child rather than a terrifying increase in “financial distress”?

Finally, the argument that the authors have mischaracterized these increased expenses as “financial distress” is underscored by their own admission that the Turnaway group did not experience an increase in past due collections (Miller, Wherry, and Foster 2023, 418). The new mothers were in fact taking on more debt, but they were also mostly getting by and, on average, their finances were gradually improving.

In short, while the authors admit that most of the differences in the outcome variables they investigated were not statistically significant, they repeatedly and willfully describe the evidence of increased household expenses (most likely due to the addition of a welcomed child into the household) as “*strong evidence* that being denied an abortion had *large effects* on markers of *financial distress*” (emphasis added, page 420, 429 and in the abstract),

despite their own evidence that the women who carried to term did not perceive themselves as more financially distressed.

### **“The economic consequences of being denied an abortion” is a misleading title**

The assertion that ANSIRH’s credit history report measures the “economic consequences” associated with having or not having an abortion is overly broad and strictly untrue.

In fact, the study measures only statistical associations related to a few credit record variables. Association is not causation, and nothing in the study remotely establishes that any of the observed differences are wholly, or even partially, the direct consequences of being “denied an abortion.”

Nor are all economic associations investigated. For example, most children grow into productive tax paying adults. But those economic consequences are not included. Also, some new parents accelerate their efforts to gain educational and career advancements in order to better provide for their children. But the lifetime effects of these economic consequences are not investigated, either. Instead, what the authors actually investigated are only a few credit score metrics which they then imbue with exaggerated importance. An accurate title for the paper would have been: “A Few Credit Score Metrics Associated with a Non-Representative, Convenience Sample of Women Turned Away from Abortion Clinics.” But this title would not have lent itself to exaggeration.

### **The Interpretation of Results Does Not Follow STROBE guidelines**

As previously noted, the authors also failed to comply with the STROBE

guidance regarding interpretation of the results: “Give a *cautious* overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence” (emphasis added).

Most of the limitations on the data described above are never mentioned. Nor can the interpretation of the results be characterized as “cautious.” Instead, the authors are overreaching in their claim that they have produced “*strong evidence* that being denied an abortion had *large effects* on markers of *financial distress*” (Miller, Wherry, and Foster 2023, 420) (emphasis added). This is subsequently expanded into: “We find evidence that being denied an abortion has *large and persistent negative effects* on a woman’s *financial well-being*” (Miller, Wherry, and Foster 2023, 429) (emphasis added).

In fact, only well-informed and critical readers will recognize that (a) the sample of women interviewed is non-representative, (b) most of the variables for which the authors expected differences were not significantly different, (c) for the few variables for which there were observed differences, the effect size was very small, declined rapidly, and was limited to measures of debt (which most likely was due to increased expenses related to having a new and welcomed child in their households), (d) the authors’ definition of “financial distress” (subsequently mutated into “financial well-being”) is overly broad and deliberately chosen to exaggerate the readers’ impression of the small and minor differences actually observed, and (e) the claimed discovery of financial distress was contradicted by the birthing groups’ own self reports which revealed no increased perception of insufficient monies.

In addition, the authors discuss abortion laws at least 22 times, leading to their conclusion that “Our study indicates that laws that impose gestational limits for abortion result in worse financial and economic outcomes for the women



who are denied an abortion” (Miller, Wherry, and Foster 2023, 431). But as noted above, their own data reveals that 10% of the Turnaway Group were turned away prior to 12 weeks gestation and over 22% were turned away prior to 18 weeks of gestation and 55% prior to 24 weeks gestation, which was the earliest limit allowed by *Roe v Wade* for laws to restrict access to abortion. So it would appear that nearly half of the women were turned away for medical reasons imposed by their abortion providers, not state restrictions. Moreover, the authors fail to identify which of these women went on to get abortions elsewhere. While the authors could have used the subset of women who were turned away after 24 weeks to test their hypothesis that laws restricting abortion were associated with differences in credit history data, they did not provide such analyses. Therefore, the author’s attempt to assert that their findings demonstrate economic harm to women who are “denied an abortion” due to state laws is overreaching and inappropriate.

### Human data was unethically obtained without informed consent

For all the reasons discussed above, findings from the Turnaway Study papers, and the credit history analysis in particular, are unreliable and overstated. They can truly tell us nothing that is applicable to the general population of women who have had abortions. For these reasons alone, publishers should issue expressions of concern and require ANSIRH to revise the papers to more fully disclose the limitations of their dataset and to narrow their discussion of findings to more cautiously interpret their results in a manner that more accurately reflects the limits of their data, alternative explanations, and the body of research revealing conflicting results.

In regard to the Turnaway Study credit history analyses, however, in my view an expression of concern would be inadequate. Unless the authors can

thoroughly document that all Turnaway Study participants, including those who dropped out prior to the first interview, consented to having their personal identifying information used to retrieve their credit histories and court records, the paper should clearly be retracted (Barbour et al. 2009).

I have requested such documentation from the authors (Reardon and Foster 2024), but have received no additional response. My reasons for believing that the subjects did not give consent are strong, and likely irrefutable.

Specifically, the Turnaway Study's solicitation of volunteers among women seeking occurred between January 2008 and December 2010, with interviews conducted by telephone one week after seeking an abortion and every six months thereafter for up to five years, meaning the last interviews were conducted in 2015 (Foster 2020). Yet, in Foster's book, *The Turnaway Study* (Foster 2020, 178), she states that the idea to link identifying data of the study participants with Experian credit reports was first brought to her attention in 2018 by economist Sarah Miller, "an economist I had never met before."

Therefore, it is clear that the consent forms signed by the participants did not include consent to access their credit reports or the court records accessed by Experian, either at the time of their enrollment between 2008 and 2010. Nor could the consent forms have disclosed the fact that accessing their credit scores might cause some negative impact on their credit scores.

It is also clear that this 2018 plan to access their credit reports through Experian's Credit Report Archives could not have been submitted to, much less approved by, the Committee for Human Research at the University of California, San Francisco prior to 2008, at the time the study was first conceived and approved. It is possible that a subsequent request to access the credit history without obtaining further consent to do so from the patients was submitted to and approved by the Committee on Human Research. But this is

not a published claim by the authors, and it has certainly not been documented, despite requests for such documentation (Reardon and Foster 2024). Moreover, it seems highly unlikely that an institutional review board would approve collection of credit history data using the personally identifying information provided over ten years earlier without participants being offered an opportunity to approve or disapprove such data collection.

The authors have also refused to provide a copy of the informed consent form signed by participants, which would indicate the range of information participants agreed to disclose (Reardon and Foster 2024). Normally, consent to participate in interviews is limited to providing only the answers participants wish to provide at the time questions are asked. In other words, consent is conditional and can be withdrawn at any time.

It would be uncommon to ask study participants to also agree to a blanket waiver allowing researchers to use confidentially provided names, birth dates and addresses to collect additional data from credit records, criminal records, medical records, or public records in addition to the data collected at interviews. One would certainly expect that requesting such a grant to link interview data to other databases would result in a larger number of eligible participants refusing to agree to be interviewed. If this was the case, perhaps this would help to further explain the Turnaway Study's very low participation rate. But if such expansive liberties were granted by the signed consent forms, surely ANSIRH would share proof of this. Instead, in the only publicly accessible copy of the "Turnaway Study Operating Procedures Manual," deposited with the American Medical Association (Gould, Barar, and Foster 2016), both the consent forms and survey questions have been redacted, without explanation or justification.

In addition, it is notable that of the 1,132 women who told abortion clinic

personnel that they agreed to be contacted by ANSIRH to answer questions about their experience, 176 (15.5%) changed their minds and refused to complete even the first interview, and approximately 50% dropped out, or were lost to follow up prior to the 2015 (Reardon 2018a), three years before the credit history study was conceived. Yet despite these women's explicit or implicit withdrawal from continued participation in the study, credit history reports were pulled for all 1,132 women who signed the undisclosed consent form at the time of their enrollment.

### The authors' claims regarding data privacy are unlikely, unrealistic, and self-contradictory

In the “Additional Materials, Replication Package” provided by the authors (Miller, Wherry, and Foster, n.d.; 2023), the ReadMe.pdf file contains a data availability statement which declares that “The consent form signed by the Turnaway study participants also states that the data will only be used within the Turnaway research team and cannot be posted publicly.” This statement is either untrue or violated at the principle investigator's whim.

As described above, the consent form itself has been withheld from public scrutiny. So its contents and provisions cannot be verified. Moreover, Sara Miller was not part of the Turnaway research team at the time any of the data was collected. Yet at least some of that data was shared with Miller in violation of the asserted policy.

In addition, the suggestion that participants did not want to have non-identifying data shared with other researchers is not reasonable. While surely participants would deserve and want a guarantee that *identifying information* would not be shared, it is not reasonable that they would insist on withholding

all other non-identifying data. Indeed, most participants in scientific research want their data to be used as widely as possible to generate the most results possible. Most would also likely agree that results based on the data they provide should be subject to re-analysis and verification by other researchers. In other words, most people are pro-science. They want their privacy protected, but they also want the data they provide to have maximized value.

Therefore, there is no reasonable justification for ANSIRH to have insisted on participants signing a consent form placing an unlimited embargo on all non-identifying data. If in fact the consent form signed by participants explicitly stated that every data point collected would be restricted solely to use by ANSIRH, that restriction in itself may have introduced additional self-selection bias. Those women who recognized that their agreement to participate gave sole proprietorship of their data to an abortion advocacy group may have been more likely to refuse to participate.

Most importantly, any restrictions on data sharing were clearly conceived and written up, not by the study participants, but by ANSIRH. Putting such restrictions into the consent form would only serve ANSIRH's proprietary interests (not those of the participants). In short, any data sharing restrictions exist solely to prevent reanalyses that might expose weaknesses or inconsistencies in ANSIRH's reported results.

Finally, it is important to note that in the heavily redacted copy of the "Turnaway Study Operating Procedures Manual" (Gould, Barar, and Foster 2016, 72), there is a provision which states: "Permission to utilize Turnaway Study data and publish analyses can only be granted by the Study's PI, Dr. Diana Foster. Interested researchers must submit a proposal to Dr. Foster prior to starting any analysis projects." This provision for data sharing is clearly what Foster would rely upon when she provided the study participants'

personal identifying information with Miller and Experian. But it also contradicts the claim that the non-identifying information *cannot be shared* with researchers outside the “Turnaway research team.”

Based on this evidence from the operations manual, the data sharing statement claiming the data cannot be shared is clearly inaccurate. It should read: “Dr. Foster reserves the right to refuse to share any and all data with persons who fail to convince her that they share her goals and objectives.”

### **The study is unreliable because it is unverifiable and nonreplicable**

Good science relies upon findings being verifiable and replicable. This is why data sharing of non-identifiable data is not only a common practice it is the preferred practice, under the FAIR principles guiding reuse of scholarly data (Wilkinson et al. 2016), the American Psychological Association’s ethical principles (American Psychological Association 2010), and the American Economic Association’s (AEA) own data sharing requirements.<sup>1</sup>

The AEA adheres to the Data and Code Availability Standard<sup>2</sup> which allows withholding of personally identifying data, but otherwise requires posting of a replication package that “allows for replication by researchers unconnected to the original parties.” It also requires “Raw data used in the research (primary data collected by the author and secondary data not otherwise available) is made publicly accessible.” In addition, “survey instruments or experiment instructions as well as details on subject selection are included.”

In other words, ANSIRH should have provided all the data it used so their

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<sup>1</sup> The American Economic Associations’s data code policy is found here: <https://www.aeaweb.org/journals/data/data-code-policy>

<sup>2</sup> The American Economic Association endorses the DCAS, the Data and Code Availability Standard v1.0 posted here: <https://datacodestandard.org/>

own findings can be verified and further investigated, plus all survey instruments fully documenting all questions that were asked and in what order. The latter is necessary in the event the ordering of questions may affect results and also to allow replication of the study using a different study population. But as previously mentioned, the only publicly posted copy of the “Turnaway Study Operating Procedures Manual” (Gould, Barar, and Foster 2016), is heavily redacted. All survey interviews, originally contained in appendices K, S and T, were among the materials redacted. These redactions make it impossible to replicate the study design.

Also, it is also clear from the data sharing statement in the same procedures manual that Foster could have used her authority to share data with researchers who are not connected with an abortion advocacy group (Gould, Barar, and Foster 2016, 72). But she chooses not to. Therefore, the data availability statement the authors provided to AES (Miller, Wherry, and Foster, n.d.) hides the fact that Foster has the authority to make the data generally available but has simply chosen to withhold it.

In the AES data availability statement, the authors also assert that “The data use agreement with Experian precludes posting these data publicly” (Miller, Wherry, and Foster 2023). But that claim, too, is suspect. While certainly Experian would require withholding of personally identifying information, it is unlikely Experian, if asked, would have opposed the posting of recoded data covering 10 credit card metrics for a mere 483 women for study replication purposes. This data would have no additional economic value to Experian, would pose no threats to consumer privacy, would help to advance science, and would help to demonstrate the potential value of buying Experian data to other social scientists. My presumption that the authors are deliberately misreading Experian’s data license would be dispelled if they provided

documentation that they made efforts to obtain Experian’s permission to include data in the replication package which were refused. Otherwise, it seems more likely that the authors did not seek any clarification, much less permission from Experian. Instead, they most likely just turned the user license they obtained into an excuse for withholding data that could have been shared.

In short, the replication package posted by the authors does not allow for replication either by access to the data reported or by access to the survey instruments used to collect the data.

This study is also nonreplicable because of the divisive politics surrounding the abortion issue. Clearly, the abortion clinics that cooperated with ANSIRH did so only because they were confident the researchers shared their pro-abortion biases. This makes it impossible for researchers who take a more critical view of abortion to gather similar information from women at the time they are seeking or have recently undergone an abortion.

That barrier to data collection makes ANSIRH’s withholding of data even more significant. If only a narrow set of biased, ideologically aligned researchers have access to obtaining a data set, it is even more important for that data to be accessible for review, verification and interpretation of results by researchers who may have different insights and biases.

### **Anonymous funding sources and related conflicts of interest**

The authors state “This study was supported by research and institutional grants from the Wallace Alexander Gerbode Foundation, the David and Lucile Packard Foundation, The William and Flora Hewlett Foundation, and an anonymous foundation” (Miller, Wherry, and Foster 2023, 1).



Since when are authors allowed to conceal funding behind “anonymous?” The whole point of requiring disclosure of funding is to help readers identify the potential influences and goals of funding partners.

As previously noted, Warren Buffett’s Susan Thompson Buffett Foundation is a major ANSIRH supporter, is deeply engaged in population control efforts, and is well known for its desire to maintain a low public profile (Ludwig 2020; Philanthropy Roundtable 2023; Harlow 2009; Martin 2016; Callahan 2014; Weise 2015). Perhaps it is the anonymous foundation. In any event, all three of the named funding sources are also deeply involved in supporting population control via abortion (Martin 2016; Brathwaite and Uchida 2023; Influence Watch 2024; Levintova 2023). This includes investments in Danco, the manufacturer of the abortion pill, mifepristone, at least by the Packard Foundation (Novielli 2019; Bernstein 2000; Levintova 2023) and perhaps others funding this study.

In other words, the funders of this study may have a vested interest in promoting the claim that abortion benefits women’s economic well-being, even if the evidence collected does not strongly support that view.

Conversely, in the face of disappointing results, researchers who received funds based on the expectation that their findings will help to prove economic harm from being denied abortions may feel obligated to exaggerate their findings in a manner designed to reflect those expected results.

In any event, the funding sources for this study have direct and indirect financial interests in abortion and the abortion pill manufacturer and distributor. These interests are not adequately disclosed. And crediting support to an unnamed foundation is simply an evasion of the ethical obligation to accurately report funding sources.

## Summary Statement

The Turnaway Study's principal investigator, Foster, has called for the retraction of abortion related studies that may have unreliable results (Littell et al. 2024). By that same standard, every Turnaway Study publication should be retracted.

Considering the limitations discussed above, the Turnaway Study is clearly unreliable. It uses a nonrandom, nonrepresentative convenience sample that suffers from a high degree of self-censure and clearly underrepresents the majority of women who feel pressured to abort contrary to their own values and preferences. In addition, the three subpopulations used in the Turnaway Study analyses are inappropriately mixed. This results in analyses that obscure rather than clarify differences between those who had abortions and those who carried to term. In at least some cases, these obfuscations have been summarized in a manner that implied negative effects were observed among all the women who were “denied abortions” when in fact the negative outcomes were only applicable to the women who had delayed abortions.

While this convenience sample may have been useful for testing survey instruments, or developing hypotheses that can be tested with better samples in the future, it is not suited for drawing any general conclusions.

Despite these limitations, which are never adequately disclosed, the authors repeatedly selectively report, misrepresent, and exaggerate the significance of their findings.

At the very least, publishers of the various Turnaway Study analyses should require the authors to publish corrigendums fully disclosing all the limitations discussed above and providing more cautious interpretations and discussions of their results per STROBE guidelines (Cuschieri 2019). A better solution,

given the inability of this weak data set to justify the conclusions ANSIRH has proclaimed as verified scientific truths (ANSIRH 2019; Foster 2020), is to retract these papers. After all, ANSIRH staff have themselves called for a retraction of abortion research that may be unreliable, arguing “Allowing inaccurate information to remain in the scientific record can have lasting and deleterious effects on law, public policy, clinical practice, and public health” (Littell et al. 2024).

Specifically in regard to the credit history paper, unless the authors provide the publisher and public with evidence that the signed informed consent forms included a waiver to allow identifying information to be used to obtain credit report data, this paper should also be retracted per COPE guidelines due to its unethical use of human data without the full informed consent of its subjects (Barbour et al. 2009).

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