

### Iatrogenic effects of Reboot/NoFap on Public Health: A preregistered survey study

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Abstract:	<p>"Reboot", especially NoFap, promote abstinence from masturbation and/or pornography to treat "pornography addiction", an unrecognized diagnosis. While the intention of Reboot/NoFap is to decrease distress, qualitative studies have consistently suggested that "Reboots" paradoxically cause more distress. The distress appears to occur in response to (1) the abstinence goal, which recasts common sexual behaviors as personal "failures", and (2) problematic and inaccurate Reboot/NoFap forum messaging regarding sexuality and addiction. This preregistered survey asked men about their experience with perceived "relapse" and NoFap forums. Participants reported that their most recent relapse was followed by feeling shameful, worthless, sad, a desire to commit suicide, and other negative emotions. A novel predictor of identifying as a pornography addict in this lower religiosity sample was higher narcissism. Participants reported that NoFap forums contained posts that were misogynist (73.7% of participants), bullying (49.1%), anti-LGBT (42.9%), antisemitic (32.0%), instructing followers to harm or kill themselves (23.5%), or threats to hurt someone else (21.1%). More engagement in NoFap online forums was associated with worse symptoms of erectile dysfunction, depression, anxiety, and more sex negativity. Results support and expand previously documented harms and problems with Reboot/NoFap claims of treating pornography addiction from qualitative research.</p>

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Iatrogenic effects of Reboot/NoFap on Public Health: A preregistered survey study

For Peer Review

## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 1

**ABSTRACT**

“Reboot”, especially NoFap, promote abstinence from masturbation and/or pornography to treat “pornography addiction”, an unrecognized diagnosis. While the intention of Reboot/NoFap is to decrease distress, qualitative studies have consistently suggested that “Reboots” paradoxically cause more distress. The distress appears to occur in response to (1) the abstinence goal, which recasts common sexual behaviors as personal “failures”, and (2) problematic and inaccurate Reboot/NoFap forum messaging regarding sexuality and addiction. This preregistered survey asked men about their experience with perceived “relapse” and NoFap forums. Participants reported that their most recent relapse was followed by feeling shameful, worthless, sad, a desire to commit suicide, and other negative emotions. A novel predictor of identifying as a pornography addict in this lower religiosity sample was higher narcissism. Participants reported that NoFap forums contained posts that were misogynist (73.7% of participants), bullying (49.1%), anti-LGBT (42.9%), antisemitic (32.0%), instructing followers to harm or kill themselves (23.5%), or threats to hurt someone else (21.1%). More engagement in NoFap online forums was associated with worse symptoms of erectile dysfunction, depression, anxiety, and more sex negativity. Results support and expand previously documented harms and problems with Reboot/NoFap claims of treating pornography addiction from qualitative research.

**Keywords**

Pornography; iatrogenic; addiction; NoFap; Reboot; abstinence

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**INTRODUCTION**

The United States appears to be experiencing a resurgence in anti-porn sentiment. Part of this anti-porn campaign appears to be using science and health terminology to advocate for legislation (Burke and MillerMacPhee, 2020). One aspect of this campaign is the idea that pornography is an “addiction” that is treated by abstinence. The largest abstinence community appears to be an online group of young, adult males who follow a concept they call “Rebooting”. The term “Reboot” refers to a period of abstinence from pornography that they believe will reset their body to a healthy state, based upon the assumption that their previous use of pornography had been harmful. For example, porn abstinence is described by Reboot followers as a cure for erectile dysfunction (Imhoff and Zimmer, 2020), and will “lead to a greater penis size when it’s flaccid” (The Reboot Nation, 2021a), based on claims that pornography causes the penis to “shriveled up” (Church, 2016a). The largest group making these sorts of claims, and selling treatments for medical disorders based on these claims,<sup>1,2</sup> is NoFap (Gałuszka, 2020).

Rebooters who follow NoFap are known as the “NoFap Army” (Rhodes, 2013) and occupy many social media platforms. Their largest presence appears to be on Reddit - special interest forums are called “subreddits” and denoted with an “r/” before their name (i.e., r/NoFap). The founder and moderator of r/NoFap, also moderates r/NoFapChristians, r/pornaddiction, r/pm lol, and r/monkmode, among others. The r/NoFap forum’s concept of abstinence from pornography often extends to any orgasm at all. The NoFap founder described Rebooting “hard mode” abstinence as “not allowed to masturbate under any circumstances (no edging). Absolutely no deliberately viewing pornography or anything close to it [...] unless if it is sex with someone I actually care about (no “booty calls” or casual sex)” (Rhodes, 2014). The NoFap founder posted a description of “monk mode” abstinence as 90 days of Rebooting, which required “not engage with any sexuality, not checking out women [...], not fantasizing, not approaching any women” (Rhodes, 2018). Most descriptions of Reboot treatments extend beyond abstinence from pornography into abstinence from masturbation, non-monogamous sex, sexual thoughts, and similar.

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<sup>1</sup> “He found NoFap and was able to make a full recovery” (Church, 2015)

<sup>2</sup> “Treatment for porn [addiction] and the related side effects is simple and involves removing just one variable from your life, using porn” (Rhodes, 2017).

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3 Rebooters refer to one another in these forums as “king”, “bro”, “soldier”, and similar. While  
4 women and gay men are not prohibited from registering in NoFap forums, they rarely post. Rebooters’  
5 posts usually focus on “days abstinent”. Posts can be self-tagged with eight different “flair” describing a  
6 post’s content (e.g., “Victory”, “Success story”, “Motivation”, etc). As suggested by the braggadocious  
7 flair, forum users are described as challenging each others’ masculinity by proving who can abstain  
8 longer (Taylor and Jackson, 2018). The founder conceptualized NoFap forums as possibly a “wall of  
9 shame’ post listing those who haven’t updated and give them one last chance before marking them down  
10 as failures” (Rhodes, 2011). NoFap appears to reflect that goal. Posts contain either authors’ brags about  
11 abstinence improving their mood, erectile function, muscularity, energy, mental clarity, focus, confidence,  
12 motivation, productivity, emotional intensity, and attractiveness to women (Fernandez et al., 2021) or  
13 despair and shame at having “relapsed” from abstinence, frequently describing a desire to kill themselves  
14 or die as a result. In summary, NoFap forum contents could be described as bipolar, filled with posts by  
15 young men and youth about personal sexual experiences that are extremely positive or extremely  
16 negative.

17  
18 Since “pornography addiction” does not appear as a diagnosis in either the Diagnostic and  
19 Statistical Manual or the International Classification of Disorders, markers of “success” in treating it are  
20 unclear. Minimally, someone who is upset by their sexual behaviors should probably feel less upset if a  
21 treatment is efficacious. Reboot/NoFap would not be considered an efficacious or effective treatment by  
22 the standards of the American Psychological Association (Lilienfeld, 2019). Despite no evidence to  
23 support it and a likelihood of creating harm, Reboot/NoFap has been widely recommended in national  
24 media and endorsed by licensed professionals in the Society for the Advancement of Sexual Health. This  
25 study seeks to test associations of Reboot/NoFap abstinence treatment components with some of its  
26 claimed effects using a preregistered cross-sectional online survey.

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**Reboot/NoFap harms**

Research suggests Reboots can be harmful or iatrogenic. “Iatrogenic” is from the Greek “iatro-”, meaning healer, and “-genic”, meaning produced by. Iatrogenic, or “healer caused”, refers to unplanned, usually negative, effects of treatment (Bootzin and Bailey, 2005). Users from Reboot subreddits (r/NoFap and r/PornFree) in one study were theorised to possess weak identities, leading to them uniting against pornography to regain their masculinity; however, the Reboot/NoFap intervention fueled *increased anxiety* and a need for self-improvement, ultimately causing greater distress at relapse events and maintenance (rather than resolution) of the problem (Chasioti and Binnie, 2021). A central claim of Reboot is that pornography causes erectile dysfunction, but this has been refuted by dozens of studies (Hoagland and Grubbs, 2021). One study specifically surveyed men who participated in a Reboot abstinence program. While anxiety strongly predicted erectile difficulties in this group, pornography viewing neither mediated nor moderated that relationship (Prause and Binnie, 2022). The authors interpreted this as possibly indicating that those in Reboot were misled by health disinformation on Reboot websites or may exaggerate their erectile difficulties.

Another study analyzed top posts on six male health topics from TikTok and Instagram (Dubin et al., 2022). The NoFap/SemenRetention topic was the most active topic and the only topic to have no physicians posting about it. The authors concluded that the accuracy of NoFap/SemenRetention information was significantly lower than all other male sexual health topics on these social media platforms. Others have echoed that NoFap grounds their false medical claims on misinterpretations of science to support sexually conservative values (Monea, 2022; Watson, 2020).

The main strategy for abstinence in Reboot seems to be distraction, which is unlikely to work. “Thought stopping” techniques for sexual content are known to paradoxically increase sexual thoughts (Efrati, 2019). Further, mere distraction is known to fail over the long term (Thiruchselvam et al., 2011). As these distraction efforts fail, Reboot followers may experience distressing emotions, such as shame or disgust, in response to their relapse. Since shame associated with sexual behaviors paradoxically increases

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3 sexual desires (van Tuijl et al., 2021), this might explain why qualitative studies found followers' distress  
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5 does not improve with Reboot.

**NoFap “Support” Forums**

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Reddit offers the ability for any subreddit to restrict users to those over 18, but r/NoFap does not use that restriction. Thus, anyone age 13 or older (the age restrictions on the Reddit platform) can engage in this aspect of Reboot treatment. Parental consent is not described on r/NoFap. In a different study scraping the data of 1,194 r/NoFap followers ([anonymized for review], in preparation), 5.4% of followers who posted text (i.e., not just a cartoon) spontaneously reported that their age was under 18, with several claiming to be 10 years old. The current study only recruited adults to comply with federal ethics requirements. Including youth in a treatment for sexual issues alongside adults without clear parental consent should be studied by ethicists.

Not everyone engages equally in Reboot forums. Some followers may only read a few forum posts, while others posted consistently for months. Previous research showed the more engaged a client was with mobile health interventions, the more their symptoms improved (Molloy and Anderson, 2021). Specifically with substance addiction treatments, more engagement (not mere attendance) with support groups caused improvements in symptoms (Dodes and Dodes, 2015). If Reboot forums are therapeutic, greater engagement with Reboot forums should be associated with improvement in symptoms.

***Sexism and homophobia***

Reboot forums have been criticized for misogynist and anti-gay rhetoric. NoFap forum followers have been estimated to be 99% male (Imhoff and Zimmer, 2020) and described as the most conservative group of the “manosphere” promoting misogyny (Burnett, 2021; Han and Yin, 2022; Hartmann, 2020). This impression may have developed from the framing of Reboot/NoFap as a masculinity challenge, where failure means you are not a [heterosexual] man deserving of a sexual relationship (Taylor and Jackson, 2018). Reboot/NoFap forums and videos frequently use openly sexist language like “bitches” and “girls” (Hartmann, 2020). /r/NoFap also shared members with “r/MRA” (Men’s Rights Activists), “r/MGTow” (Men Going Their Own Way), and “r/Incel” (involuntary celibates) subreddits (Khan and Golab, 2020;

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3 Massachs et al., 2020), widely known for hateful posts about women. Possibly related to some hatred of  
4 feminism, Reboot/NoFap also claim that viewing homosexual erotic images is evidence of “escalation” of  
5 the disease of pornography addiction (Hartmann, 2020). Rather than viewing homosexual pornography as  
6 exploring one’s own sexuality, viewing homosexual pornography is conceptualized as a symptom to  
7 abstain. Given this, it is unsurprising that r/NoFap members are rarely members of LGBT communities  
8 (Massachs et al., 2020).

***Anti-semitism***

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17 NoFap forums were described as productive targets for white supremacist recruitment (von Sydow,  
18 2020). This is linked to a false conspiracy theory that Jewish persons control the pornography industry for  
19 the purpose of promoting race mixing (Kerl, 2020). Some have theorized this may be why NoFap is most  
20 active on Reddit forums, where misogyny and anti-semitism occur in largely unregulated forums  
21 (Johanssen, 2021). A scrape of Twitter data discussing NoFap also identified anti-semitic language  
22 infused with this false conspiracy theory (Burnett, 2021).

***Trolling and Violence***

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25 To our knowledge, neither trolling nor violence have been explored systematically in NoFap  
26 forums. Trolling has been defined as “Internet users who aim to disrupt online interactions” (Brubaker et  
27 al., 2021). Trolling comments are thought to constitute about 1% of Reddit posts (Fichman and Sharp,  
28 2020) but are more common on subreddits that solicit high affect posts, use sexual vulgarities, and  
29 include long posts (Tsantarliotis et al., 2017). The NoFap moderator described trolls on his forum as in  
30 the “millions”,<sup>3</sup> which may prevent the environment from providing support.

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33 Suicidal ideation was not associated with problem pornography viewing in a survey of 283 men  
34 (Shirk et al., 2021). Yet, in a qualitative analysis of 104 journals from a Reboot website (Fernandez et al.,  
35 2021), 3 followers spontaneously expressed suicidal ideation as a response to their Reboot. In addition,  
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54 <sup>3</sup> “There's probably maybe anywhere from 10 to 50 pornographic things posted on NoFap every day”  
55 attributed to a conspiracy of a single scientist “just trolling everywhere, just posting millions of different  
56 aliases every day” (Rhodes, in Church, 2015).  
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23.1% of followers in that study described negative affect attributed to Rebooting. Reboot coaches describe suicidality and negative emotions as an expected part of Reboot suffering required to “heal”<sup>4,5,6,7,8,9</sup>. Homicidal threats were surprisingly common in NoFap forums, exceeding by several hundred posts in other subreddits of comparable post frequency and content ([blinded for review], 2022). Posts describe graphic plans to murder “pornographers”<sup>10,11</sup> and women who tempt them to “relapse”.<sup>12,13</sup> Other scientists also noted a remarkably “angry tone adopted by many NoFap members in response to pornography. The tone is almost combative in its abhorrence” (Taylor and Jackson, 2018).

### Predictors of “Pornography Addict” Identity in Rebooters

“Moral incongruency” theory suggests that those who believe they are addicted to pornography experience distress due to personal values that conflict with their own pornography viewing (Grubbs and

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<sup>4</sup> “The 12 week mark in my reboot, I was terrified, had suicidal ideation, um, just depressed, anxious, and horrified” (The Reboot Nation, 2021b).

<sup>5</sup> “Cut porn out of your life that’s going to make life worth really living” (Queppet, in Church, 2015).

<sup>6</sup> “I just typed in suicide. I got 26 pages of guys contemplating killing themselves” (Deem, 2017).

<sup>7</sup> “I get super depressed when I go on the forums” (Deem, 2020a).

<sup>8</sup> “If you’re going through hell, keep going” (The Reboot Nation, 2021a).

<sup>9</sup> “This biological warfare we’re in is hard and there are casualties. As long as you have living breath to fight in you, you are a hero” (Olsen and [Not given], 2021).

<sup>10</sup> “I relapsed after 8 days. I knew it was inevitable but I never thought I was going to nut 8 days into my streak. I have never felt so regretful. I really hate the porn industry. Who’s fucking idea was it. To make people like us suffer. I ever meet a nsfw artist or a pornographer i will make sure to bash their skull in to wall and make sure they stay dead. I wouldn’t mind getting caught by the authorities. I will make sure that no one will suffer the same pain I am going through, nutting to frickin pixels on a damn screen. The toughest part of failing a streak is getting back from the filth of the mud and starting over again. But I am going to do that. I will not let myself be pushed around by fools. I hope that one day I meet a nsfw artist so that dirty my hands with scummy blood and paint the walls of their apartment with. Thank you for reading this all.” (No\_Tap\_, 2021)

<sup>11</sup> “I would also recommend taking down MindGeek founder Fabian Thylmann last I heard he owns both pornhub and xvideo to be honest I have never killed someone but I would end that guy for humanity for justice!” (CleetusJoe, 2019).

<sup>12</sup> “Also bro... cmon how much we have been pussyfied that we see a lil rape and "ooh im traumatized i im damaged".... not saying anything against the boy, but since when did we became so weak ??? Just a couple of years there were wars and people were seeing such a shit and not complaned, now u see ooh he punched him, ooh he raped her a lil bit, that traumatized me, i need a therapy... xDDD People in the medieval have been trought such shit daily and didnt need anti-depresants or other shit, cuz "life is too hard" its just redicilous, masculinity and strenght have diminished those days.” (TheBibleIsTheTruth, 2022).

<sup>13</sup> “I blame women for everything. Keep in mind your kind is mainly responsible for overpopulation and mental problems faced by most males due to 'your' inability to raise children. truth of the matter is every woman should be killed 3 to 4 years after childbirth, for sake of human race” (mi9Celibacy, 2016).

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Perry, 2019). These conservative values often arise from a religious upbringing. Yet, Reboot treatments were marketed to secular audiences. If Reboot followers actually are less religious than other self-identified pornography addicts, then what drives Rebooters' identification as pornography addicts?

Several lines of evidence suggest narcissism might underlie self-identification as a pornography addict in those who are not religious. Self-identity as "sexually compulsive" is associated ( $r = .52$ ) with narcissism (Oswald et al., 2021). Reboot clients encourage each other by claiming one another and themselves to be triumphant, strong, and attractive (Taylor and Jackson, 2018). Narcissists may attribute erectile difficulties to something outside of their control to maintain a positive self-image (Douglas et al., 2017), leading coaches to appeal to clients as "unwitting victim[s]" of imagined pornography cabal(s) (Burnett, 2021).

Narcissism and belief in conspiracies appear linked by a desire to maintain self-infallibility by demonizing others (Cichocka et al., 2016). Narcissists are convinced their unique brilliance leads them to know more than scientists in the relevant field (Bertin et al., 2021; Bowes et al., 2021; Lantian et al., 2017). Conspiracy beliefs are, at their core, a mistrust of authority, making scientific authorities a frequent target (Pierre, 2020). For example, Reboot coaches claimed to media, without evidence or expertise, that pornography "hijacks" neurocircuitry (Burke and MillerMacPhee, 2020), and described actual scientists in conspiratorial terms.<sup>14,15,16</sup> Other common conspiracies in Reboot include that pornography companies have secret deals with pharmaceutical companies to cause erectile dysfunction,<sup>17</sup> and that Jews/feminists/liberals secretly run the pornography industry in order to stop them from reproducing with "real girls" (Burnett, 2021). While individuals are susceptible to conspiracies for different reasons (Andrade, 2020), those who believe conspiracies scored lower on critical thinking tests

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<sup>14</sup> "propaganda mouthpieces" for pornography companies (Deem and Van Maren, 2021).

<sup>15</sup> A scientist who speaks to the media about pornography effects "pretty much is the arch enemy of all of us" (Rhodes, in Church, 2015).

<sup>16</sup> "showing experts" how wrong the experts were (Wilson, in Helfer, 2016)

<sup>17</sup> "Free porn is a business. It helps to sell pills to fix your limp dick." (Deem, 2020b).

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(Lantian et al., 2021). Relatedly, those who use social media to garner health information tend to be misled to inaccurate health information due to a belief in false conspiracies (Allington et al., 2021).

Yet, individuals also may deny their conspiracy beliefs to avoid being viewed as gullible and/or socially excluded (Lantian et al., 2018). A narcissist might be attracted to the “addict” label to avoid social moral judgements that might otherwise be viewed as failures of the individual (Bailey, 2005). This is a problem, because adherence to the “addict”, rather than recovery, identity has been associated with lower self-efficacy, more negative behaviors, and maintained distress (Buckingham et al., 2013). Narcissists' efforts to self-regulate problem behaviors ultimately result in seeking positive feedback rather than actual change (Morf and Rhodewalt, 2001). Narcissists also perceive personal slights everywhere (McCullough et al., 2003), which may make them resistant to expertise. Narcissism and belief in conspiracies may predict identifying as a “porn addict” in Reboot/NoFap treatments.

### Hypotheses

Hypotheses were preregistered prior to data collection

([https://osf.io/ux47b/?view\\_only=6739f6f8d4e74a809e95cd64b836dade](https://osf.io/ux47b/?view_only=6739f6f8d4e74a809e95cd64b836dade) [anonymized for review]).

Hypothesis 1: The reported intensity of suicidal thoughts attributed to relapse events will be significantly higher than population mean (i.e.,  $\mu = 1$  (having no suicidal thoughts)). The shaming approach of Reboot that call viewing porn a personal “failure” may lead to thoughts of suicide. As suicidality is a highly negative outcome, any elevation of suicidal ideation by perceived “relapse” events is considered clinically significant.

Hypothesis 2: The more engaged with the Reboot forum NoFap (a) the more negative emotions associated with relapse (b) the more likely they are to have witnessed negative behaviors on the NoFap website and (c) the more sexually restrictive. Qualitative research suggested on NoFap suggested that these “support” forums actually shame participants for common sexual behaviors, and this shaming is often in the form of attacks on individuals' core identity (e.g., sexual orientation, gender).

Hypothesis 3: Those with higher depression, anxiety, narcissism, belief in conspiracy, erectile dysfunction, and religiosity also will report greater certainty that they are addicted to pornography. Most

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research has pointed to conservative values as an important predictor of identify as a pornography addict, but Reboot/NoFap claims to be secular. This hypothesis tests which traits or symptoms are more likely to predict an identity as a pornography addict in men familiar with Reboots.

Hypothesis 4: Those who report being more sure that they are a porn addict also will report more erectile dysfunction, but this will be mediated by participation in Reboot interventions.<sup>18</sup>

Hypothesis 5: Those who believe NoFap is run by scientists or licensed therapists also are less likely to have sought help from licensed mental health professionals.<sup>19</sup>

Hypothesis 6: Those who believe NoFap harmed them also will report higher depression, anxiety, and erectile dysfunction. If Rebooters are young or sexually inexperienced, they may struggle to accurately attribute their mental health symptoms. If Rebooters who believe they were harmed by NoFap also reported poorer health outcomes, this argues against the possibility that they are poor at attributing changes in their mental health. If a belief they were harmed is related to more positive outcomes (or vice versa), then they are more likely inaccurate in their attributions.

Every registered analysis was conducted and reported. The study was approved by a federally-assured Institutional Review Board [blinded for review].

## METHODS

Most research on Reboot has been qualitative. We sought to quantify relevant constructs. However, like early Alcoholics Anonymous (Dodes and Dodes, 2015), Reboot groups actively fight and threaten litigation to avoid being researched (Gałuszka, 2020). Thus, a survey with platform advertisements was used to reach men who had heard of Reboot.

### Questionnaires

Participants provided demographic and sexual history information, relationship happiness (Spanier, 1976), responses to standardized questionnaires (see below).

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<sup>18</sup> The results of this test were reported in a separate, published paper ([redacted for review])

<sup>19</sup> Only n = 56 (9.5%) of the sample reported visiting a professional, leaving this test underpowered. It was excluded from further reporting.

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**Religiosity**

Religiosity was assessed using 3 items. One item concerned the frequency of attendance at religious services (Lugo and Cooperman, 2010), another concerned prayer frequency outside of religious services (Mockabee et al., 2001), and the third concerned how important religion was in their life (Michalak et al., 2007). These three items have been added previously to characterize religiosity (Arbuckle and Konisky, 2015) and specifically religiosity as related to pornography use and attitudes (Grubbs, Lee, et al., 2020).

The score range was 3 to 17.

**Mental Health**

Symptoms of major depressive disorder (Kroenke et al., 2003) and generalized anxiety disorder were measured using two items each (Kroenke et al., 2009). Participants were asked “Over the last 2 weeks, how often have you been bothered by any of the following problems?” and could respond 0 (“Not at all”) to 3 (“Nearly everyday”). Responses were added (total range 0 to 6). These brief screeners had comparable discriminative validity to both 9 and 7-item screeners, respectively (Staples et al., 2019). A meta-analysis examined the relationship between this depression screener and clinical interviews for depression. For scores  $> 2$  sensitivity (detecting diagnosis when present) = .91 and specificity (not detecting diagnosis when not present) = .67; for scores  $> 3$  sensitivity = .72 and specificity = .85 (Levis et al., 2020). This means, depending on which decision you want to optimize, this scale is able to accurately identify up to 91% of depression when it is present and accurately identify up to 85% of people as not having depression when they truly do not.

**Personality**

Participants reported their narcissism and belief in conspiracy. Narcissism was measured using the Single Item Narcissism Scale (SINS). SINS is “To what extent do you agree with this statement; “I am a narcissist”” with responses from 1 (“not very true of me”) to 7 (“very true of me”). The word ‘narcissist’ means egotistical, self-focused, and vain” (Konrath et al., 2014). Narcissists were fairly aware of their own narcissism and readily reported the same (Carlson, 2013). SINS correlated with longer measures of narcissism (Ames et al., 2006) and was discriminable from measures of self-esteem (van der Linden and

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Rosenthal, 2016). A score of 4 or above has been interpreted as “higher” narcissism (Macenczak et al., 2016).

A single-item scale was used to assess propensity to believe in conspiracies.<sup>20</sup> This item demonstrated concurrent, convergent, discriminant and predictive validity (Lantian et al., 2016). Although the item lacks some construct and factorial validity (Goreis and Voracek, 2019), it converged with related concepts like the psychological need to feel unique (Lantian et al., 2017) and refusing to follow COVID-19 precautions (Coroiu et al., 2020). This measure was distinct from paranoia (Imhoff and Lamberty, 2018).

### ***Sexuality***

Three dimensions of sexuality were measured, including erectile functioning, pornography use, and openness to casual sex.

#### **International Index of Erectile Function-5.**

The International Index of Erectile Function uses five items to measure erectile function (Rosen et al., 2000). The range is 5 to 25 where higher scores indicate *fewer* erectile problems (suggested interpretation is severe = 5 to 7, moderate = 8 to 11, mild to moderate = 12 to 16, mild = 17 to 21, and none = 22 to 25). The IIEF-5 has been used to screen large clinic populations (Rhoden et al., 2002). In that study, dysfunction prevalence was estimated as 53.9%, highlighting what may be a tendency to over identify ED. The IIEF is conservatively interpreted to reflect erectile “difficulties” rather than dysfunction. The IIEF-5 was elevated in men with coronary artery disease (Gazzaruso et al., 2004) and positively associated with age, body mass index, cholesterol, and triglycerides in patients with heart disease (Fung et al., 2004).

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<sup>20</sup> “Some political and social events are debated (for example 09/11 attacks, the death of Lady Diana, the assassination of John F. Kennedy). It is suggested that the “official version” of these events could be an attempt to hide the truth to the public. This “official version” could mask the fact that these events have been planned and secretly prepared by a covert alliance of powerful individuals or organizations (for example secret services or government). What do you think? Please indicate to what extent the sentence below represents how you think about this: I think that the official version of the events given by the authorities very often hides the truth.”

## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 13

**Pornography use.**

Pornography use is notoriously challenging to measure (Kohut et al., 2020). It was assessed using three questions (cp., Grubbs, Lee, et al., 2020). Pornography was defined for participants as “any sexually explicit films, video clips or pictures displaying the genital area, which intends to sexually arouse the viewer; this may be seen on the internet, in a magazine, in a book, or on television”. Participants indicated their average solo viewing in the last year (1 “Not at all” to 8 “once a day or more”), frequency of masturbation during viewing (1 “Never” to 5 “Always/Almost always”), and frequency of viewing pornography when masturbating (0 “I never touch myself for sexual pleasure” to 6 “Always/Almost always”). Identity as a pornography addict was assessed by “Would you say that you are a “porn addict”?” (0 “Definitely not a porn addict” to 6 “Definitely a porn addict”). Since some individuals may continue to identify as an addict despite viewing themselves as recovered, we included “How upset are you about your current pornography viewing?” (0 “Not at all upset” to 6 “Extremely upset”).

**Sociosexual orientation inventory (SOI).**

SOI is a 9-item measure characterizing sexual openness (Simpson and Gangestad, 1991), especially interest in uncommitted sex (Penke and Asendorpf, 2008). In addition, this questionnaire also served as reinforcement for participation. Individuals who chose to complete all 9 items were provided their score, graphically compared to norms for their gender and age. This novel incentive eliminated the risks associated with collecting identifying information for financial rewards (Buchanan and Hvizdak, 2009).

***Relapse affective response***

Participants who indicated that they had tried a “Reboot” answered how many times they had relapsed. If they had relapsed at least once, they were prompted to describe their response to their “most recent” relapse. Specifically, they rated a list of emotions that they may have experienced in response to a “relapse” from the Positive and Negative Affect Scales (Watson et al., 1988) from 1 (“not at all”) to 5 (“extremely”). We added the item “suicidal”. We included one positive experience, “joy”, so participants could indicate (unexpected) positive experiences from relapse.

***NoFap online forums***

## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 14

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2  
3 If the participant responded that they had visited NoFap forums, then they were asked to rate how they  
4 felt about NoFap on a scale from 1 (“Strongly disagree”) to 5 (“Strongly agree”). Items included “NoFap  
5 helped me” and “NoFap is a source for accurate scientific information”. Further, they were asked to rate  
6 how often they noticed ten problems in the forums. They could respond from 1 (“Never saw such posts”),  
7 2 (“One post ever”) up to 7 (“Posts overwhelming”). Items included “Sexism (bad comments about  
8 women)”, “Bodyshaming (bad comments about fat, muscularity, or similar)”, and “Told to harm or kill  
9 myself”.

### 17 **Procedures**

18  
19  
20 Study data were collected using Research Electronic Data Capture (REDCap) electronic data capture  
21 tools hosted at [redacted for anonymous review]. REDCap is a secure, web-based platform designed to  
22 support data capture for research (Harris et al., 2019). Invitations with a link to the Informed Consent  
23 were presented through accounts posted by, or tagged, on Twitter (e.g., @TheIASR, @Reboot\_Nation,  
24 @JustinLehmiller, @NoFap, etc.), Reddit (e.g., r/NoFap, r/pornfree, r/pmohackbook, etc.), and Discord  
25 servers (e.g., “Reboot Warriors”, “PMO recovery”, “No Nut Central”, etc.). Forums were selected for  
26 recruitment where followers were likely to have heard of Reboot approaches. Advertisements also were  
27 placed on Twitter and Reddit targeting these communities.

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Members of these groups did attempt to sabotage the research. These escalated into threats  
against the investigators reported to Reddit and law enforcement. Groups also attempted to block their  
members from learning about the study. Paid advertising (e.g., on Reddit) was used to circumvent blocks.

### 43 **Data analysis**

44  
45 All hypothesis tests were pre-registered on Open Science Framework  
46 [https://osf.io/ux47b/?view\\_only=6739f6f8d4e74a809e95cd64b836dade](https://osf.io/ux47b/?view_only=6739f6f8d4e74a809e95cd64b836dade) [anonymized for review]. Tests  
47 were powered using a criterion of  $1 - \alpha = .80$ ,  $p = .05$ , and  $ES = 0.1$ . Power refers to the ability of a test to  
48 detect an effect of a particular size if the effect is actually present. Where unplanned tests occurred, they  
49 were noted. Sexuality variables are often right skewed, meaning most people choose low levels of a  
50 variable with fewer and fewer people choosing higher and higher values (e.g., lifetime partner count). The



## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 15

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3 reader may notice tests varying depending on the distribution of particular variables being tested. These  
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5 are described more fully in the preregistration (above) complete with R analytic code.  
6

## 7 RESULTS

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9 Non-completion rates were high like most online surveys. Of the 693 participants who started the  
10  
11 questionnaires, 587 completed at least the first background questionnaire. Six were excluded for being  
12  
13 female. Median completion time was 10.1 minutes. Ultimately, 417 (71.0%) completed every single  
14  
15 questionnaire. This was comparable with other online surveys (cp., 68.5% in Lauer et al., 2013; 75% and  
16  
17 63.7% in Miller et al., 2020).  
18

### 19 Participants

20  
21 Participants were primarily white, moderately-educated and heterosexual men (see Table 1). Most  
22  
23 participants had personally tried a Reboot. Those who tried Reboot reported many relapses.  
24  
25

### 26 Descriptives

#### 27 *Defining reboot and relapse*

28  
29 The definition of what constitutes a “Reboot” or “relapse” varied between participants. The most  
30  
31 agreement (lowest variance) of relapse (see Figure 1) was for “Masturbating while viewing pornography”  
32  
33 ( $SD = .88$ ). The least agreement (highest variance) was for “Hidden sex with a partner who is not my  
34  
35 primary (main) partner” ( $SD = 1.73$ ). The number of days a participant believed they should be abstinent  
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37 to complete a “Reboot” averaged 42.0 days with high variance ( $SD=36.6$ )<sup>21</sup>.  
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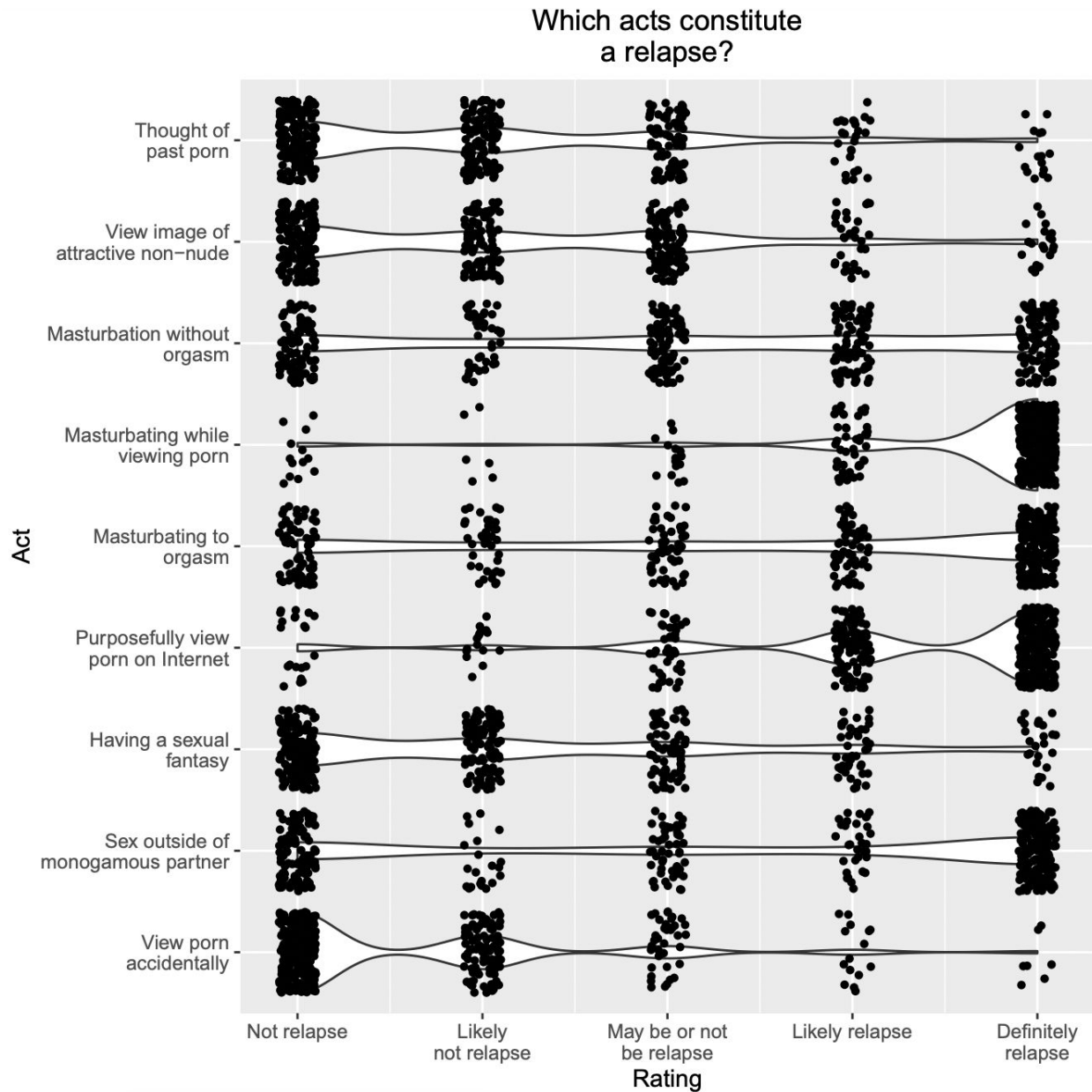
### 41 Figure 1

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43 *Belief that a behavior constitutes a Reboot relapse.*  
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56 <sup>21</sup> Participants could not select more than “over 90 days”, which 63 participants chose.  
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## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 16

*NoFap forum problems*

Some individuals would rate that they had “Never” seen any of the post types, or that every single post type was “Overwhelming”, a response set known as “straightlining” (Schonlau and Toepoel, 2015). that This creates outliers (Leiner, 2019). These are not regarded as valid and interfere with the distribution requirements for statistical tests. Respondent-level standard deviation identified straightlining (Barge and Gehlbach, 2012). Respondents whose  $SD = 0$  were removed from this analysis. This meant that only reporting “Overwhelming” or only reporting “Never” would be equally removed.

## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 17

NoFap forum visitors reported witnessing content that was trolling (88%), misogynist (73.7%), bullying (49.1%), anti-LGBT (42.9%), or anti-semitic (32.0%). Many participants were told to harm or kill themselves (23.5%) and witnessed threats to hurt others (21.1%), and dox others (17.1%) on NoFap forums.

### *Responses to most recent relapse*

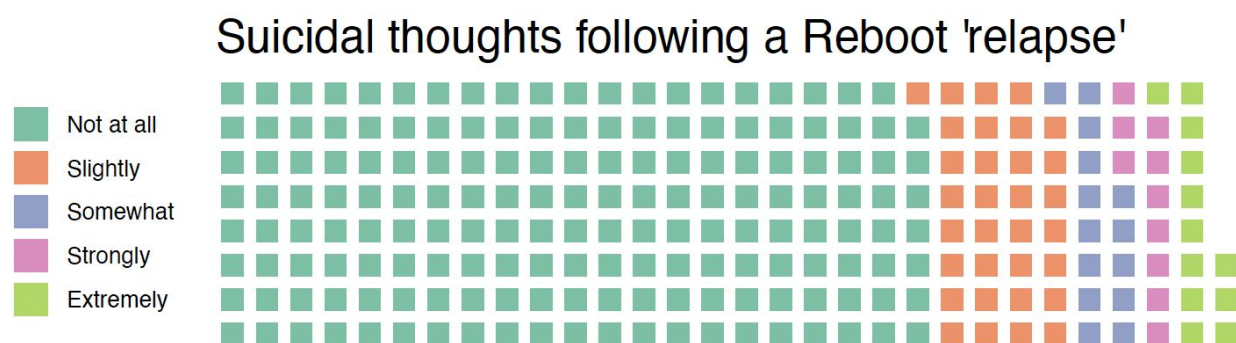
Only participants who indicated that they had experienced a relapse were invited to answer these questions.

### **Suicidality (H1)**

Sixty-six (28.9%) participants reported they felt suicidal due to their most recent relapse, with 12 reporting feeling “extremely” suicidal (see Figure 2). The distribution of scores were right skewed (skew=1.4, Jarque = 223.3,  $p < .001$ ). Following our analytic plan, transformations did not sufficiently reduce skew. A wilcoxon signed-rank test (V) was used, because it only requires that variables be ordinal rather than continuous and normally distributed.<sup>22</sup> Suicidal feelings were significantly elevated from “Not at all” in response to relapse ( $V(234) = 2346, p < .001$ ).

### **Figure 2**

*Intensity of feeling suicidal following the most recent ‘relapse’.*



We explored whether suicidal feelings were linked to engagement in NoFap forums. Spearman’s rank test (rho), which only requires that variables be ordinal rather than continuous and normally

<sup>22</sup> Our planned analysis was consistent ( $t(232) = 8.0, p < .001$ ).

## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 18

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3 distributed, demonstrated a significant positive relationship ( $\rho(206) = 0.20, p = .004$ ). The more  
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5 involved a participant was with NoFap forums, the more suicidal they reported feeling in response to their  
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7 last relapse (see Figure 3).<sup>23</sup>  
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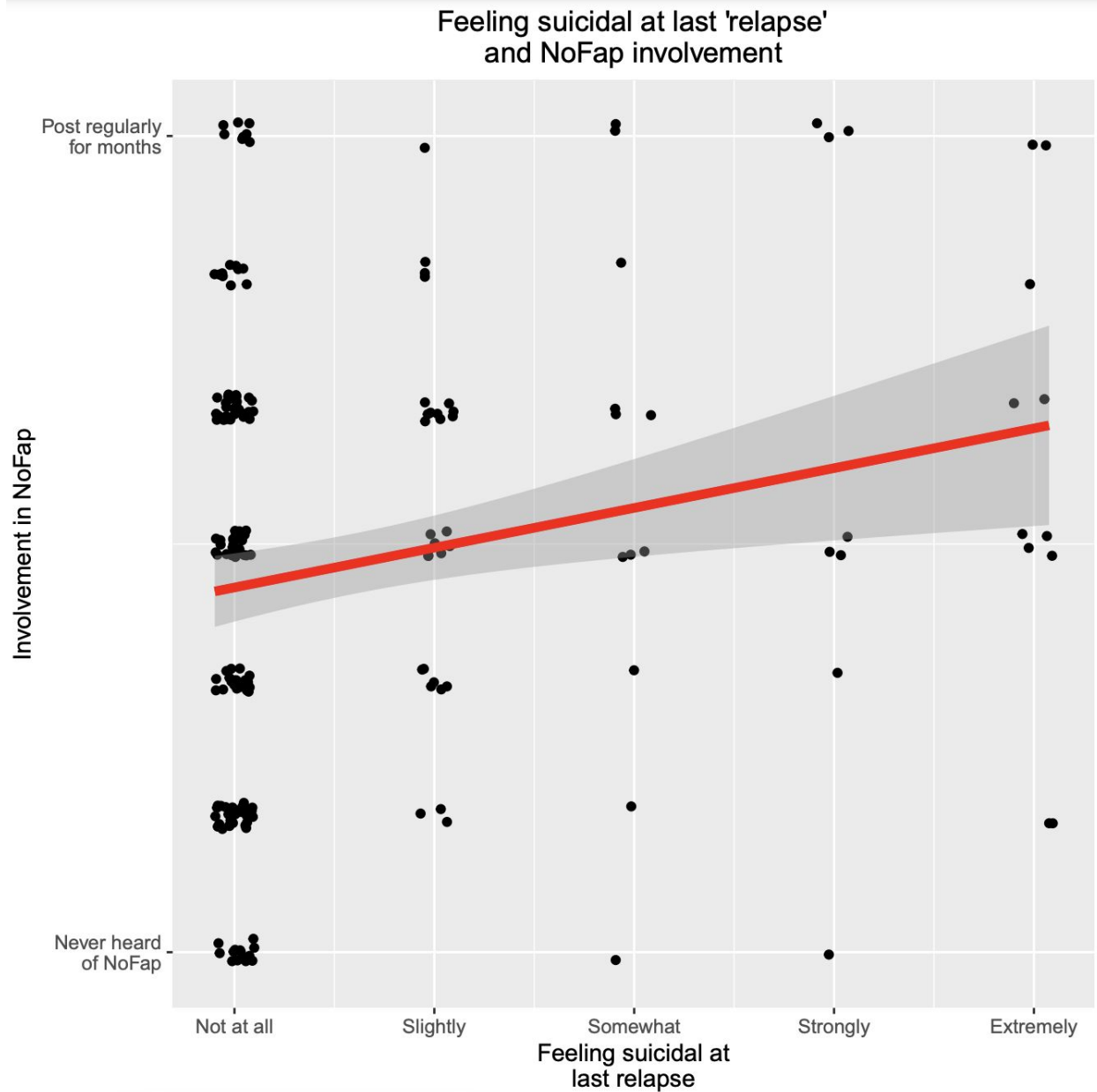
**Figure 3**

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11 *The more involved with NoFap online forums, the more likely participants experienced suicidal ideation*  
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13 *at their last 'relapse' event.*  
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53  
54 <sup>23</sup> We also conducted this analysis including the option “Was involved at some level in the past, but have  
55 not been involved for several months” as the most involved option. The pattern of result was the same  
56 ( $\rho = 0.16, p = .01$ ).  
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## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 19

**NoFap involvement associations (H2)***Negative emotions during relapse (H2a)*

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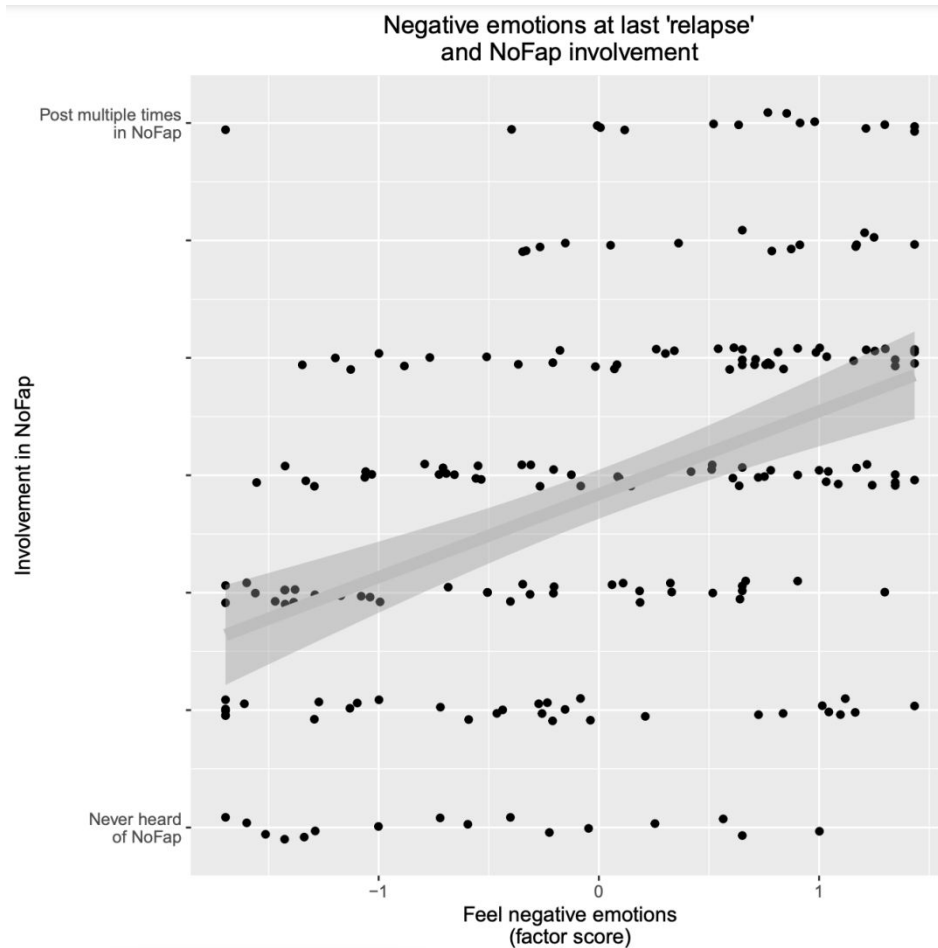
The factor solution fit well with a single factor ( $R^2 = .94$ , see Table 2). In other words, the variance among the negative emotions reported tended to vary together, such that one score could be computed to characterize when negative emotions, in general, changed. The bootstrapped correlation between the negative emotion factor and participation in NoFap forums was significant ( $r_{boot}(200) = .42, p < .001$ , see

## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 20

Figure 4).<sup>24</sup> The more involved a participant was with the NoFap forums, the more negative emotions that they reported experiencing following their most recent relapse. One exploratory follow-up test supported that the more involved a person was with NoFap, the more “ashamed” they felt in response to their most recent relapse ( $\rho(208) = .27, p < .0001$ ).

**Figure 4**

*Involvement with NoFap and feeling negative emotions with last ‘relapse’.*



*Negative forum behaviors (H2b)*

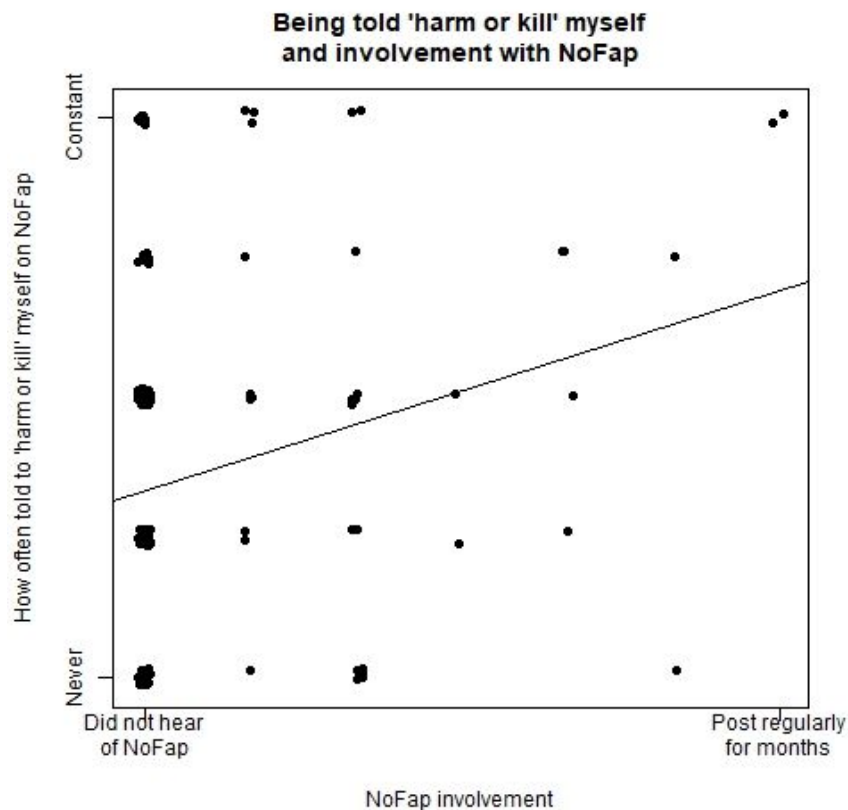
<sup>24</sup> We also conducted this analysis including the option “Was involved at some level in the past, but have not been involved for several months” as the most involved option. The pattern of result was the same ( $r_{boot} = .31, p < .001$ ).

## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 21

The MANOVA was significant ( $F(1,230) = 2.4, p = .01$ ). Follow-up, one-way ANOVA's demonstrated involvement with NoFap was related to the participant more frequently witnessing the instructions "told to harm or kill myself" ( $F(1,118) = 5.7, p = .02$ , see Figure 5).<sup>25</sup>

**Figure 5**

*Involvement with NoFap and being told to 'harm or kill myself'.*



*More sex negative (H2c)*

Involvement with NoFap and sex negativity was significant ( $r_{boot}(368) = -0.23, p < .0001$ , see Figure 6).

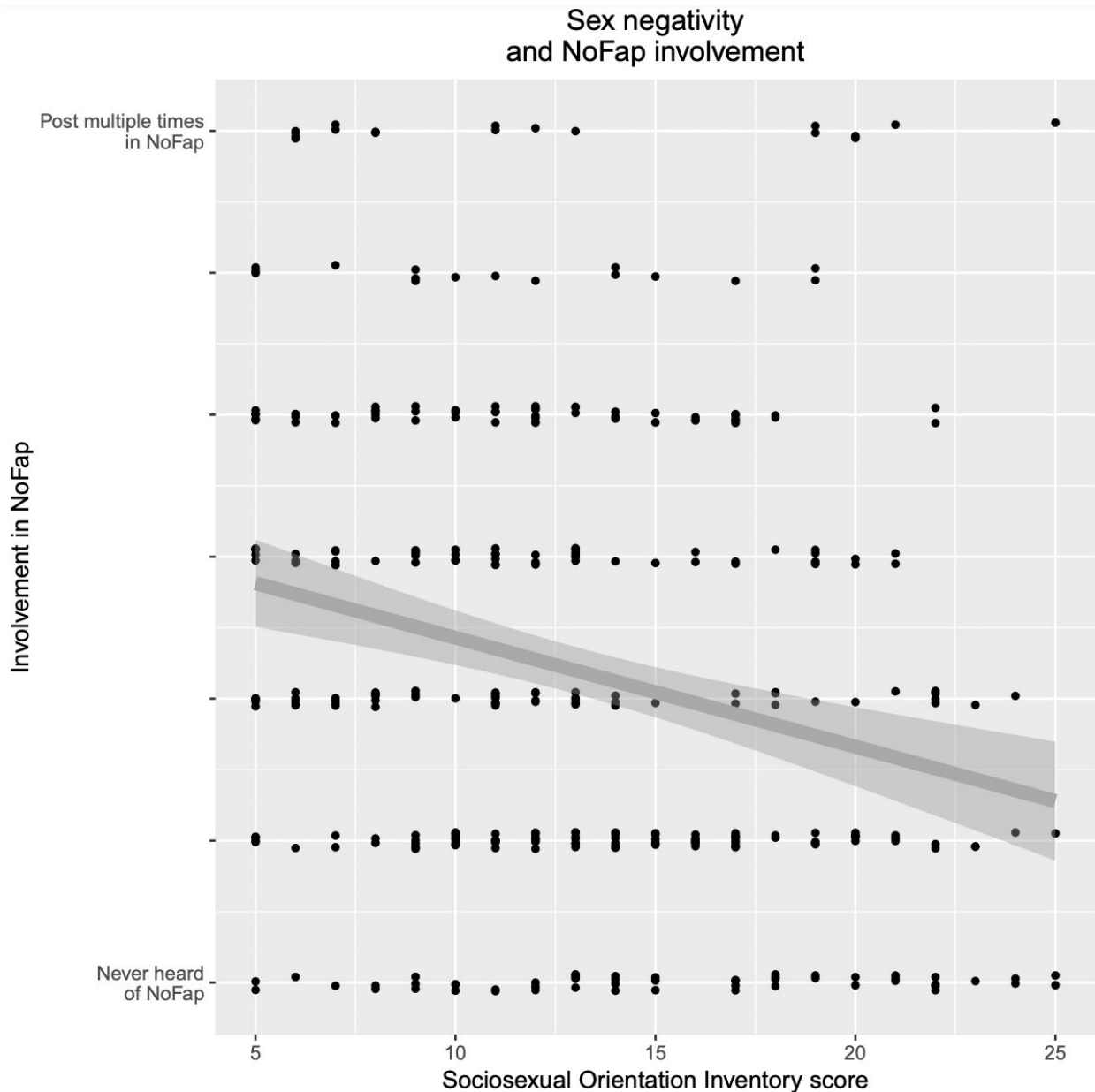
The more involved a participant was with NoFap, the more sex negative their Sociosexual Orientation Inventory scores.

**Figure 6**

<sup>25</sup> When straightlining was removed, the MANOVA remained significant ( $F(1,173) = 1.9, p = .046$ ). Follow-up one-way ANOVA's identified "told to harm or kill myself" was observed more often the more someone visited the NoFap forums ( $F(1,173) = 5.9, p = .02$ ).

## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 22

*Involvement with NoFap and Sociosexual Orientation Score.*



### Predictors of addict identity (H3)

The linear model was significant ( $F(6, 351) = 20.5, p < .001, R_{adj}^2 = .25$ , see Figure 7). Narcissism ( $\beta_{std} = .21, CI = 0.12 \text{ to } 0.30, \eta_p^2 = .06$ ), anxiety ( $\beta_{std} = .24, CI = 0.12 \text{ to } 0.36, \eta_p^2 = .06$ ), and erectile difficulties ( $\beta_{std} = -.22, CI = -.31 \text{ to } -.13, \eta_p^2 = .06$ ) predicted identification as a pornography addict (see Figure 7).

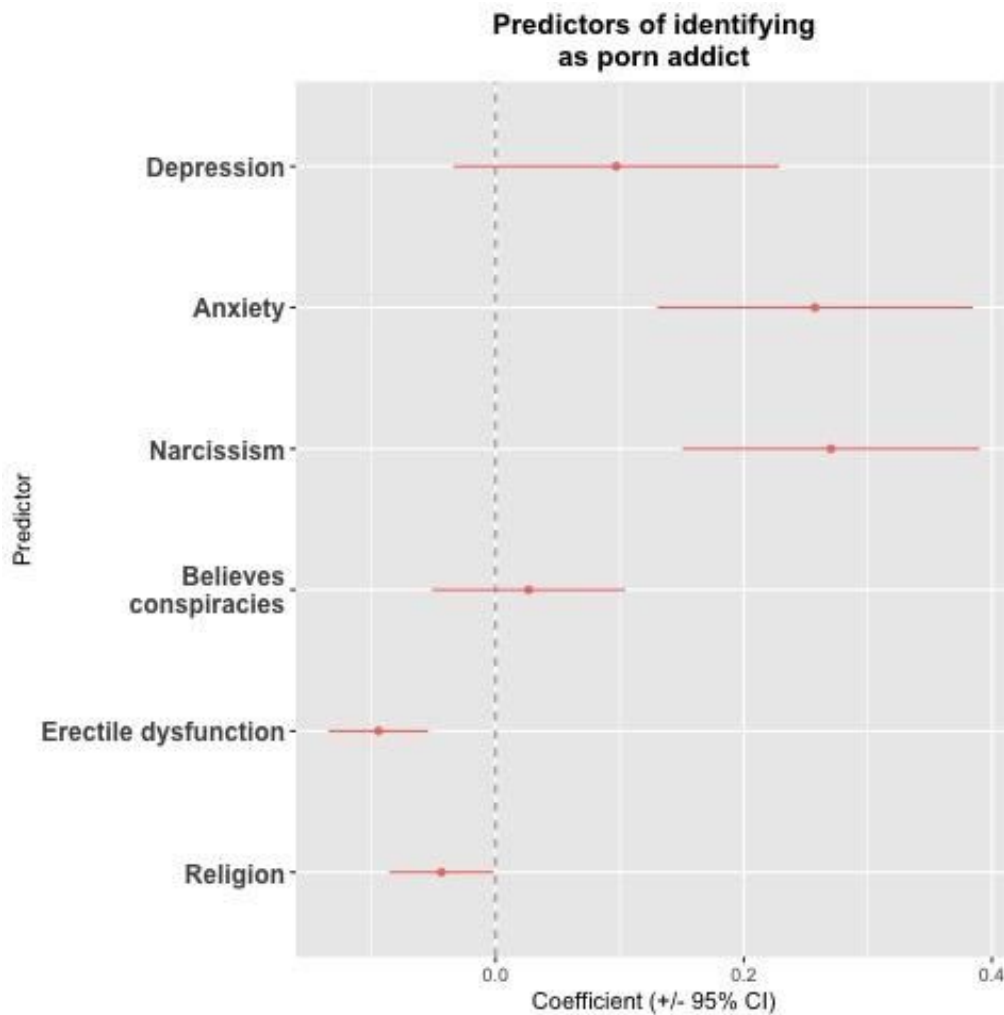
Specifically, those who more strongly identified as a pornography addict in this sample also reported more narcissism, anxiety, and erectile dysfunction.



## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 23

Figure 7

*Predictors of Identity as a Pornography Addict.*



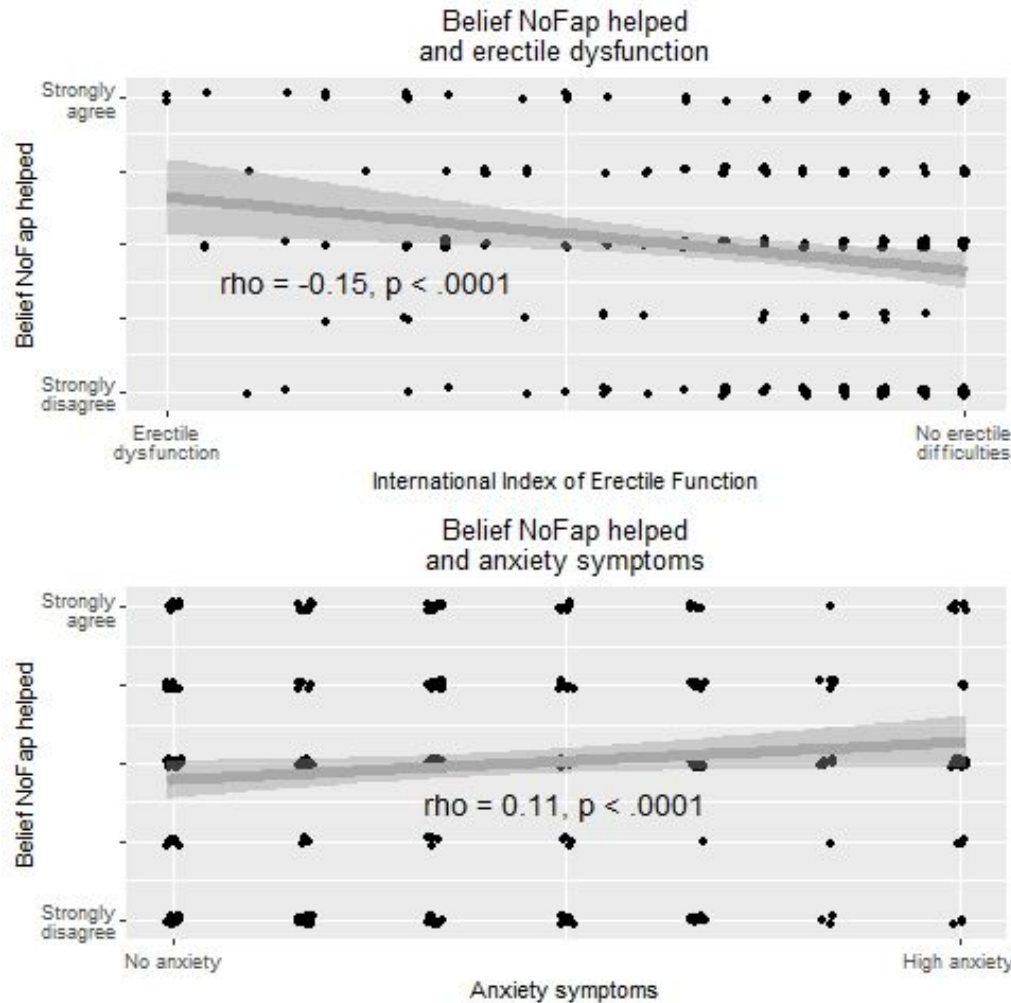
### NoFap harms (H6)

A belief that “NoFap helped me” was associated with anxiety and erectile difficulties. Specifically, the more a participant believed that NoFap helped them, the more anxiety ( $\rho(338) = 0.11, p = .04$ ) and erectile ( $\rho(278) = -0.17, p = .004$ ) difficulties they reported (see Figure 8). Depression symptoms were not significantly associated with the belief that NoFap was helpful.

Figure 8

*Belief NoFap Helped and Symptoms of Erectile Dysfunction and Anxiety.*

## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 24



Perhaps individuals did not receive a sufficient “dose” of the Reboot treatment? An exploratory analysis identified that the more involvement a participant reported in NoFap forums, the more anxiety ( $\rho(375) = 0.20, p < .001$ ), depression ( $\rho(377) = 0.18, p < .001$ ), and erectile ( $\rho(318) = -0.15, p = .007$ ) difficulties they reported (see Figure 9). To explore why participants might feel helped despite worse symptoms, we explored belief in conspiracies. A shared belief in false conspiracies, such as “The porn industry is targeting NoFap”, might have supported a feeling of belongingness to this group despite poorer actual measures of health. Those who reported that NoFap had been more helpful also were more likely to believe in conspiracies ( $r(328) = .26, p < .001$ , see Figure 10).

**Figure 9**

## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 25

The more involved with NoFap online forums, the more symptoms of anxiety, depression, and erectile dysfunction.

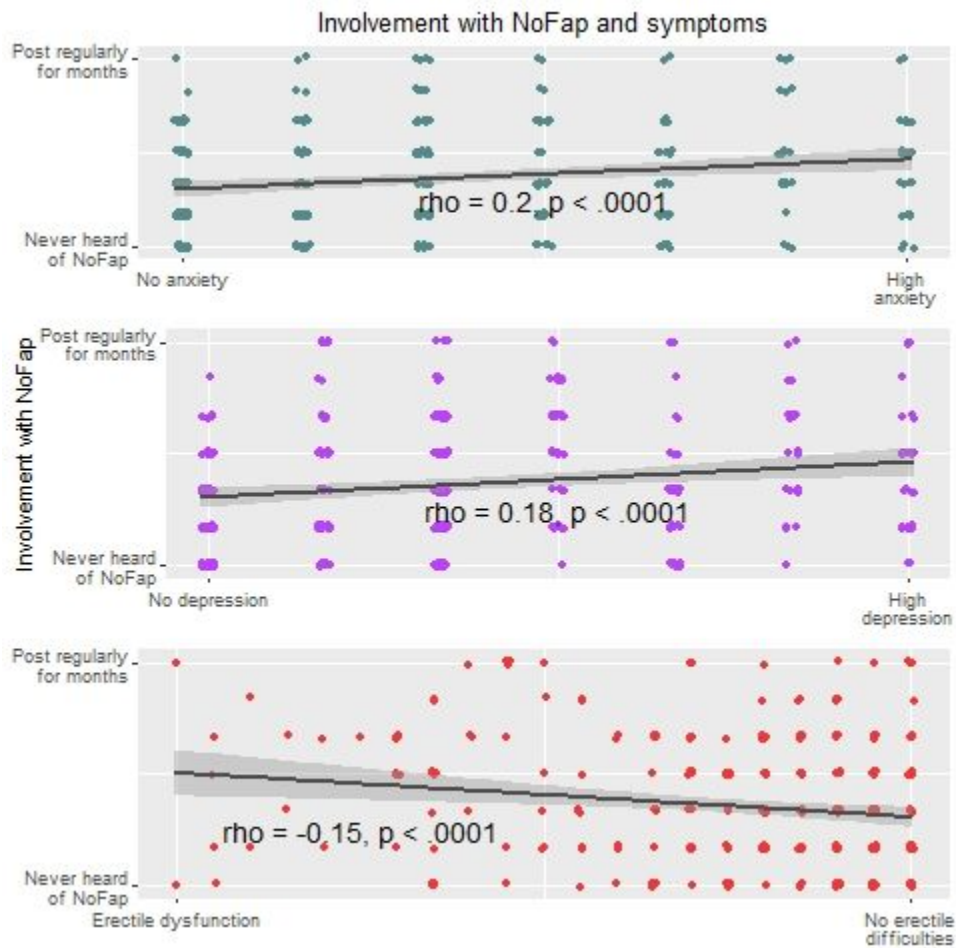
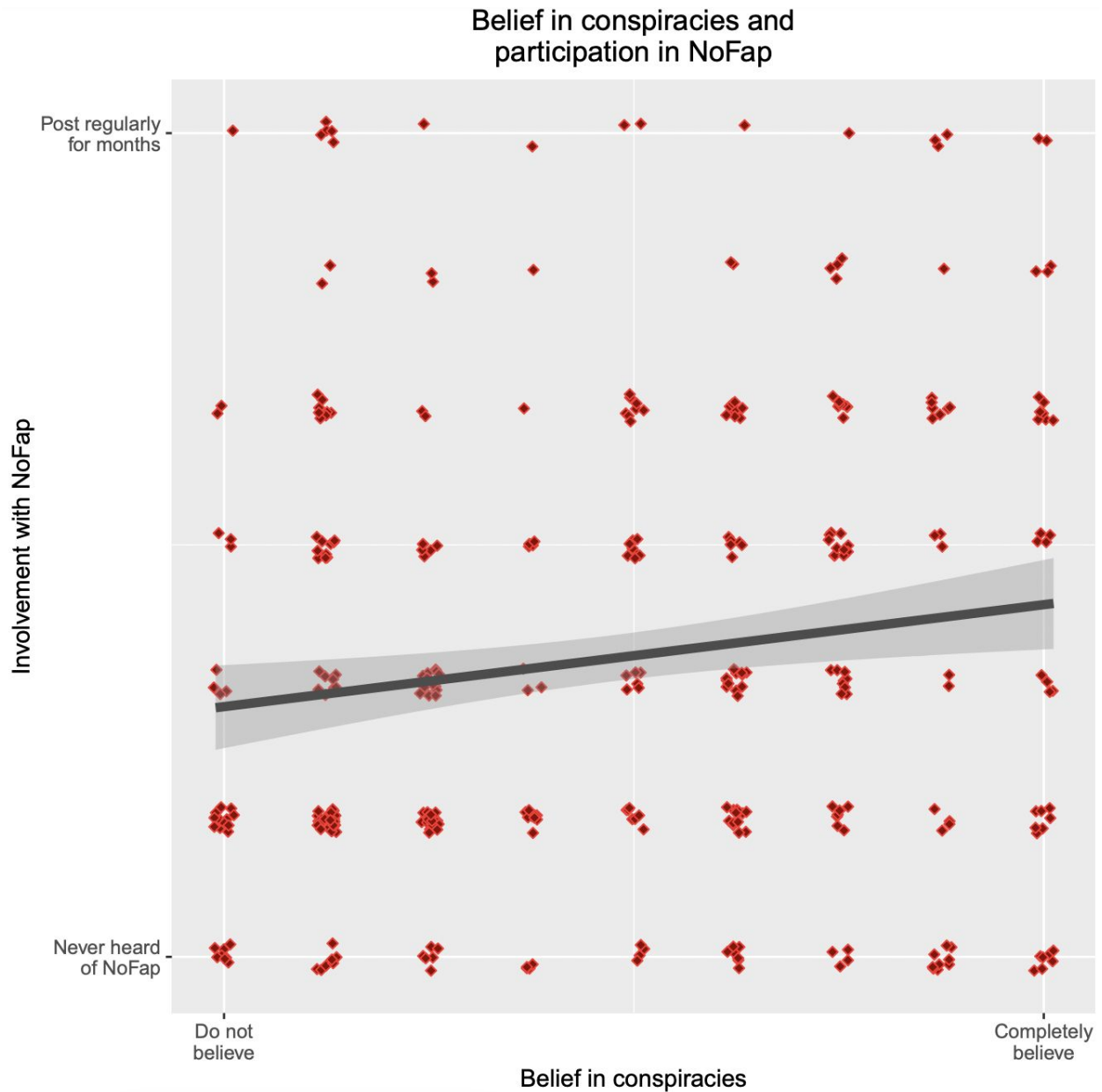


Figure 10

The more involved in NoFap online forums, the greater the belief in conspiracies.



DISCUSSION

This cross-sectional, preregistered survey examined associations with “Reboot” treatments for pornography addiction, including abstinence goals and online forums. Many (28.9%) Reboot participants reported that their most recent failure to maintain/reach the Reboot abstinence goal caused them to feel suicidal. The more engaged a participant was with NoFap, the more (1) negative emotions they

## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 27

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3 experienced at their most recent relapse, (2) likely they had been told to “harm or kill themself”, and (3)  
4 restrictive (disapproving of casual sex) their sexuality. Predictors of identifying as a “pornography addict”  
5 in this sample included being more narcissistic, higher anxiety, and more erectile dysfunction. Very few  
6 participants sought care from licensed professionals for their pornography concerns. Finally, the more a  
7 participant believed that NoFap had helped them, the more anxiety and erectile problems they reported.  
8 Relatedly, participants who reported more engagement in NoFap forums also reported more current  
9 depression, anxiety, and erectile problems in contrast to previous research on treatment engagement  
10 associated with fewer symptoms.  
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13  
14 Evaluating any treatment requires considering the spontaneous recovery rate of the problem  
15 behavior. In a study that followed a large sample of randomly selected persons for 5 years, 95% of men  
16 who reported pornography concerns at baseline spontaneously recovered within 5 years (Konkolý Thege  
17 et al., 2015). Recent data show sex/pornography problems over 5 years were not chronic (Gooding et al.,  
18 2022). While some have advocated research into abstinence (Fernandez et al., 2020), continuing to spend  
19 limited research resources for clinical trials (Heiman, 2002) developing abstinence Reboot programs now  
20 appears wasteful, especially given the spontaneous recovery rate.  
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24 While still lacking a random-assignment, controlled clinical trial (Floyd et al., 2021), a number of  
25 potentially effective interventions for distress regarding pornography have been tested. Two smaller trials  
26 of Acceptance and Commitment Therapy (ACT) reduced distress regarding pornography viewing (Crosby  
27 and Twohig, 2016; Twohig and Crosby, 2010). When a romantic partner is available, empirically-  
28 supported treatments for couples’ distress are appropriate (Sniewski et al., 2018). A case series of  
29 meditation for pornography viewing distress specifically sought (mostly unsuccessfully) to reduce guilt  
30 and shame following pornography viewing (Sniewski et al., 2020). None of these treatments used  
31 abstinence or community support touted by Reboot coaches. Thus, Reboot treatments create additional  
32 harms by leading the public away from these evidence-based treatments.  
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36 Exploratory analyses suggested those who are more engaged with NoFap also report more belief  
37 in conspiracies. Belief in conspiracies is thought to be a response to experiencing uncertainty, presumably  
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## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 28

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3 as a mechanism to feel in control (Adam-Troian et al., 2021). If a man is anxious about his erections, the  
4 conspiracy beliefs in Reboot forums likely provide a way for the man to feel he is unique/special (not  
5 simply anxious) and/or paranoia that the pornography industry conspired against him (Pierre, 2020).  
6  
7 These individuals tend to have low science literacy, possibly consistent with younger age of those  
8  
9 participating in Reboot (Landrum and Olshansky, 2019). Further, these conspiracies may drive some of  
10  
11 the threats to harm others that were witnessed by participants. Specifically, “activists within the anti-  
12  
13 pornography movement have not, for the most part, faced violence, discrimination, or mistreatment,  
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15 where sex workers and their allies, especially queer people of color, have” (Burke, 2022). The role of  
16  
17 conspiratorial thinking was not a focus of this study, but appears possibly useful to explore in future  
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19 research.  
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24 Reboot/NoFap treatment is usually administered by unlicensed “coaches” who refer to followers  
25 as “clients” (e.g., Church, 2015). Lifestyle coaches lack clear or standardized credentials, and their  
26  
27 claimed expertise usually is solely experiential (George, 2013). They often do not have any occupational  
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29 history that informs client relationships (Murphy and Kreiner, 2020). Despite this lack of training, strong  
30  
31 claims of expertise<sup>26</sup> and guarantees of a cure<sup>27</sup> are common among Reboot coaches. Coaches reassure  
32  
33 clients that they can cure a variety of concerns by remaining porn-abstinent.<sup>28,29,30</sup> Coaches have no  
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35 relevant education, training, licensing, or supervision requirements, offering no real legal protections for  
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37 clients who are harmed (Aboujaoude, 2020). Unlike licensed mental health care professionals, a coach is  
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39 under no legal obligation to protect the confidentiality of their clients’ disclosures (Anderson et al., 2012)  
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41 and cannot discern when a mental health care referral is needed (Anderson et al., 2012). Such pseudo-  
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43 practitioners are known for pushing their clients into acts that are inappropriate (Giraldez Hayes, 2021).  
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50 <sup>26</sup> “Yes, I am an expert on quitting porn”

51 <sup>27</sup> “Everyone that’s been successful in staying away from porn has seen improvement and ultimately recovered”  
52 (Deem, 2020c).

53 <sup>28</sup> “guys recover from sexual dysfunction simply by removing the single variable of Internet porn” (Deem  
54 and Van Maren, 2021).

55 <sup>29</sup> “...what changing one single variable can do” (Wilson, in Helfer, 2016).

56 <sup>30</sup> “...truly commit to never viewing porn again” (Church, 2014).  
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## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 29

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3 However, even “certified sex addiction therapists” have no published efficacy for their claimed treatments  
4 (Grubbs, Hoagland, et al., 2020). These licensed therapists vested in addiction models may be unable or  
5 unwilling to direct clients away from iatrogenic addiction therapies (Speers et al., 2022). The results in  
6 the current study cannot definitively apportion blame to the pseudo-practitioners or the Reboot treatment  
7 modality: both appear faulty.  
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14 The data regarding suicidality are concerning given that Reboot treatments are mostly  
15 administered by untrained coaches. Although even licensed professionals debate the best course of action  
16 to reduce the risk of suicide (e.g., Rudd et al., 2006), Reboot coaches and communities have neither the  
17 training nor authority to respond adequately to self-harm reports. Narcissists are more likely to become  
18 suicidal when shamed (Gabbard, 2022). Given that Reboot is a shame-based treatment, narcissists may be  
19 the participants reporting feeling most suicidal in response to the Reboot treatment. They may be unable to  
20 reconcile their self-concept as “king” and “soldier” with experiences described by Reboot coaches as  
21 personal failures. As with any study, this study had limitations. The sample suffers from the same  
22 problem of low ethnic and sexual orientation diversity as studies of sexual compulsivity (Jennings et al.,  
23 2021). However, this might reflect the nature of these particular men, many following a program with  
24 forums commonly assailing LGBT persons. It may be that the low diversity actually is representative of  
25 men who have heard of Reboot, who appear to seek reassurance that they are not gay from viewing gay  
26 pornography or wish to avoid LGBT persons due to prejudice (Hartmann, 2020). Treatment programs for  
27 sex and pornography “addiction” also are well-known to primarily include white clients (Ley et al., 2014).  
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43 Several of the measures, while peer-reviewed and well-characterized psychometrically, were very  
44 brief. For example, a single-item measure of narcissism was used. Some scientists have suggested that  
45 narcissism has multiple, differentiable components, such as grandiose or vulnerable narcissism (e.g.,  
46 Foster et al., 2015). The single item used in this study does have predictive validity thought to reflect both  
47 grandiose and vulnerable narcissism (Konrath et al., 2014). Future research may explore whether current  
48 findings with brief scales can be replicated with longer measures, or may be specific to facets of the  
49 constructs studied.  
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## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 30

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5 Harmful therapies are well-documented in clinical science (Lilienfeld, 2007; Williams et al.,  
6 2021). They can slip through unnoticed for years because therapists often struggle to catch when their  
7 clients are deteriorating (Hatfield et al., 2010) and do not use instruments designed to monitor for client  
8 harms (Gilbody et al., 2001). Reboot treatments are most similar to iatrogenic, anti-LGBT conversion  
9 therapies. These also shame sexual behaviors and promote suicidal ideation (Glassgold, 2022).  
10  
11 Additional research into Reboot/NoFap treatment efficacy appears unwarranted, as it is unethical to  
12 expose participants to iatrogenic treatments. Therapists who refer clients to Reboots/NoFap will most  
13 likely harm their clients. Given decades of research on pornography concerns without evidence-based  
14 treatment literature ([Grubbs et al. 2020](#)), scientists also should not waste further time and resources  
15 testing harmful Reboot abstinence treatments.  
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**DECLARATION OF INTEREST STATEMENT**

[REDACTED FOR REVIEW] receives fees to provide continuing education workshops for mental health professionals concerning sex therapy. [REDACTED FOR REVIEW] received death threats on Reboot platforms. [REDACTED FOR REVIEW] has no conflicts of interests to declare.

For Peer Review

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## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 50

**Table 1.** Demographic information

Variable	Mean	SD
Age	31.8	12.2
Lifetime sexual intercourse partners <sup>⊕</sup>	13.5	22.8
International Index of Erectile Function <sup>T</sup>	19.8	4.8
Sociosexual Orientation Inventory <sup>□</sup>	2.8	0.7
Depression symptoms	2.3	1.9
Anxiety symptoms	2.3	1.9
Pornography viewing frequency <sup>□</sup>	6.6	1.6
Belief porn addict identity <sup>□</sup>	3.6	2.1
Concern about porn use <sup>♠</sup>	3.2	1.6
Narcissism	3.0	1.6
Belief in conspiracies	4.9	2.5
Relapse count <sup>□</sup>	20.7	19.1
	<b>Count</b>	<b>Percentage</b>
Education		
None	2	0.3%
8th grade/less	1	0.2%

## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 51

9-11 grades	10	1.7%
High school	88	15.0%
Technical or trade school	21	3.6%
Some college	120	20.4%
Associate degree	29	4.9%
Bachelor's degree	175	29.8%
Master's degree	81	13.8%
Professional degree	26	4.4%
Doctoral degree	24	4.1%
Race <sup>□</sup>		
American Indian or Alaska Native	10	1.7%
Asian	73	12.4%
Black or African American	32	5.5%
Native Hawaiian or Pacific Islander	5	0.9%
White	385	65.6%
Other	61	10.4%
Don't know	5	0.9%
Refuse to answer	23	3.9%

## IATROGENIC EFFECTS OF REBOOT/NOFAP ON PUBLIC HEALTH 52

## Sexual orientation

Homosexual	36	6.7%
Bisexual	71	13.2%
“Straight” or heterosexual	402	74.7%
Something else	22	4.1%
Decline to answer	7	1.3%

## Current romantic relationship

Single, choose to be single	125	23.3%
Single, but prefer not to be single	189	35.3%
Have a steady romantic partner (like a girlfriend or boyfriend)	74	13.8%
Living with a romantic partner (like a girlfriend or boyfriend)	24	4.5%
Married or similar commitment (common law marriage, religious bond, etc.)	124	23.1%

## Current sexual relationship

Not sexually active with others by choice	130	24.1%
Not sexually active with others, but wish I was	168	31.2%
Casual partners	47	8.7%

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Monogamous partner (we are only sexual with each other)	157	29.2%
Open partner (my main partner and I are sexual with others by agreement)	21	3.9%
"Cheating" partner (sexual with others than my main partner without their knowledge or consent)	15	2.8%
Personally tried to "Reboot"	257	62.5%

⊕ Sex partners could be reported up to 100; † Lower score indicates better erectile function; ‡ Range from 1 "Not at all concerned" to 5 "Very concerned"; § Range from 0 "Definitely not a porn addict" to 6 "Definitely a porn addict"; ¶ Range from 1 to 5 with higher scores indicating less constrained sexuality; □ Range from 1 "Not at all" to 8 "Once a day or more"; ▫ The maximum number of relapses that could be reported was 50, which was selected by 60 participants; ▬ Participants could select more than 1 category

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**Table 2.** Emotion weights contributing to factor score.

<b>Emotion</b>	<b>Weight in factor score</b>
Sad	0.79
Anxious	0.66
Worthless	0.86
Upset	0.86
Angry	0.81
Despair	0.80
Disgusted	0.85
Ashamed	0.83