*Article*

# Behind the Blackpill: Self-Verification and Identity Fusion Predict Endorsement of Violence Against Women Among Self-Identified Incels

$\circledS$SAGE

Gregory J. Rousis[1] [ID], Francois Alexi Martel[2], Jennifer K. Bosson[1] [ID], and William B. Swann Jr.[2]

## Abstract

Incels (*involuntary celibates*) have advocated for and even enacted violence against women. We explored two mechanisms that may underly incels' actions: identity fusion and self-verification. Study 1 ($n = 155$) revealed stronger identity fusion (deep alignment) with the ingroup among men active in online incel communities compared to men active in other male-dominated groups. Study 2 ($n = 113$) showed that feeling self-verified by other incels predicted fusion with incels; fusion, in turn, predicted endorsement of past and future violence toward women. Study 3 ($n = 283$; preregistered) replicated the indirect effects from Study 2 and extended them by linking fusion to online harassment of women. All indirect effects were particularly strong among self-identified incels high in narcissism. We discuss the synergistic links between self-verification and identity fusion in fostering extreme behaviors and identify directions for future research.

Incels (short for "involuntary celibates") are an online community of men who claim that their desires for sexual and romantic relationships are frustrated by repeated rejection from women (Ging, 2019). The group has gained notoriety as members have translated their violent misogyny (Glace et al., 2021; Ribeiro et al., 2020) into heinous crimes including mass murder (Hoffman et al., 2020). In this report, we seek to identify the psychological mechanisms that motivate incels. We suggest that men join incel groups seeking verification of their self-views. The self-verification they receive from group members fosters feelings of identity fusion (i.e., deep alignment) with the group. Feelings of fusion, in turn, foster endorsement of the misogynistic values held by the group, including justifying violence against women. We tested these ideas in several empirical investigations of men who self-identified as incels. To put our analysis in context, we begin with a brief overview of incels and their dominant ideology.

## Incels, the Blackpill Ideology, and Misogyny

Incels' guiding worldview, the *Blackpill* ideology, proposes that women as a group control access to status, power, and resources (Hoffman et al., 2020), but abuse their dominant

position by embracing superficial values. In particular, in choosing romantic and/or sexual partners, heterosexual women putatively weigh physical attractiveness more heavily than personality, income, education, and/or occupation (Cottee, 2020). Women's shallow preoccupation with men's physical attractiveness ostensibly consigns incels, along with any man who does not live up to women's flawed standards, to lives of celibacy or cuckoldry.

The Blackpill ideology further contends that men's rightful (i.e., higher) status in the gender hierarchy has been unjustly usurped by women, especially feminists. This conviction encourages a strict embrace of masculinity norms (Ging, 2019; Glace et al., 2021) and routine denigration of women in incels' online discussion forums (CCDH Quant Lab, 2022). For example, one popular incel website consistently features posts advocating the sexual assault of women to maintain social order and enforce male superiority, with

[1]University of South Florida, Tampa, USA
[2]The University of Texas at Austin, USA

**Corresponding Author:**
Gregory J. Rousis, Department of Psychology, University of South Florida, 4202 East Fowler Avenue, Tampa, FL 33620-9951, USA.
Email: grousis@usf.edu

30% of posts rated as explicitly misogynistic and expressing hatred of women (Jaki et al., 2019). Chillingly, some incels translate misogynistic beliefs into real-world violence. For example, in 2014, self-identified incel Elliot Rodger killed seven people, including himself, as an act of revenge on women who rejected him (Nagourney et al., 2014). Inspired by Rodger, self-identified incels have since been responsible for the murders of more than 60 people in North America and Europe (Hoffman et al., 2020).

Research on incels has been largely limited to archival textual analyses of incel forums and social media posts (e.g., Brooks et al., 2022; Ging, 2019), and examinations of mental health concerns among self-identified incels (e.g., Moskalenko, González, et al., 2022; Speckhard & Ellenberg, 2022). This work provides instructive insights into phenomena such as: the geospatial locations of incel activity (Brooks et al., 2022); how the Blackpill ideology differs from more traditional misogynist ideologies (Ging, 2019); the psychological traumas and mental health concerns prevalent among incels (Costello et al., 2022; Moskalenko, González, et al., 2022); and the reluctance of members of incel communities to seek help for mental health issues (Speckhard & Ellenberg, 2022).

Together, the foregoing investigations provide insight into key aspects of incels' behavior, experiences, and beliefs. Nevertheless, to date, researchers have stopped short of systematically examining the processes that motivate incels. Our research is designed to fill this gap by considering how two identity-related processes—self-verification and identity fusion—may help to explain incels' embrace of an extremist ideology that promotes violence against women.

## Incels, Self-Verification, and Identity Fusion

When people enter relationships, one of their key priorities is feeling known and understood or "self-verified" (Swann, 1983, 2012). Evidence of a desire for self-verification comes from dozens of studies indicating that people prefer and seek evaluations that confirm both negative and positive self-views (Bosson & Swann, 1999; Swann et al., 1990). Moreover, people desire verification of both their global characteristics ("I am a worthwhile person") and their specific characteristics ("I am stubborn"; Swann et al., 1989; for reviews see (Kwang & Swann, 2010; Swann, 2012). Furthermore, people are not only more inclined to remain in relationships in which partners verify their self-views (De La Ronde & Swann, 1998; Neff & Karney, 2005; Swann et al., 1992), they are also more committed to, and productive within, work groups and settings in which they receive self-verification (Swann et al., 2000, 2003; Wiesenfeld et al., 2007).

We suggest that potential incels may be particularly interested in self-verification from incel communities. Consider that self-identified incels often feel loathed by the wider society (Daly & Reed, 2022). Such feelings are decidedly nonverifying for most people. Starved for self-verification and suffused with anxiety and depression (Costello et al., 2022), incels may be eager to align themselves with any group that seems to understand them. The Blackpill ideology fits the bill because it offers a face-saving explanation for the perceived plight of incels—that is, incels are merely victims of the wiles of women and their shallow mate preferences. For these reasons, budding incels may seek and find verification from online incel communities.

Once potential incels begin affiliating with the group, the self-verification they receive will likely encourage them to develop strong, family-like ties to other group members. Eventually they may develop a powerful form of alignment with the incel group called identity fusion (e.g., Swann et al., 2009). When identity fusion occurs, the boundaries between the individual's personal and group identities become so porous that people experience a sense of oneness with the group. These porous boundaries allow the individual to maintain a sense of personal agency while simultaneously experiencing a deep, familial connection to the group.

The sense of familial connectedness that incels develop toward the group can have profound consequences. For the fused person, the welfare of the group becomes every bit as important as their own personal welfare. This motivates fused individuals to enact behaviors that are compatible with the group's goals and values (Swann et al., 2009, 2012; Whitehouse et al., 2014), including even violence, self-sacrifice, and retribution against outgroup members (Fredman et al., 2015; Swann et al., 2014). Fusion is therefore an exceptionally strong predictor of violent pro-group behavior, consistently out-predicting rival variables such as group identification (for reviews, see Gómez et al., 2020; Rousis, 2022; Swann & Buhrmester, 2015) and sacred values and moral convictions (Martel et al., 2021). In the case of incels, fusion should motivate incels to marinate themselves in the Blackpill ideology and endorse its violent misogyny.

## Overview

We propose that men join incel communities seeking self-verification that adherents of the Blackpill ideology are uniquely able to provide. Once they marinate themselves in incel groups, the self-verification that men receive should encourage them to fuse to the group. Identity fusion, in turn, should predict endorsement of radical acts on behalf of the group, including violence against, and online harassment of, women. To the best of our knowledge, we are the first to examine the interplay between these identity-related processes, and one of the first systematic investigations of the motives of self-identified incels.

In our empirical research, we considered participants incels if they (1) self-identified as members of this group and (2) were knowledgeable regarding key beliefs of this

**Table 1.** Correlations and Descriptive Statistics for Study 1 Variables.

| Variable | Frequency | Agreement | Hostile sexism | Identity fusion |
|---|---|---|---|---|
| Frequency | — | .513*** | −.041 | .424*** |
| Agreement | | — | .365*** | .703*** |
| Hostile sexism | | | — | .355*** |
| Identity fusion | | | | — |
| n | 155 | 155 | 121 | 130 |
| α | — | .859 | .942 | .979 |
| M | 5.174 | 4.219 | 3.416 | 3.352 |
| SD | 3.136 | 1.362 | 1.091 | 1.834 |
| Skew | −0.061 | −0.650 | −0.235 | 0.231 |
| Kurtosis | −1.657 | −0.055 | −0.209 | −1.185 |

***$p < .001$.

group. Prior to testing our theoretical ideas, we conducted a preliminary study (Study 1) in which we asked if men active in incel communities exhibited stronger identity fusion than active members of other male-dominated online communities, including other gender-based groups (Men's Rights Movement [MRM] communities; Hodapp, 2017) and an apolitical control group (New England Patriots fans).

## Study 1

Relative to other male-centric online communities (e.g., MRMs, football fan groups), incels are distinguished by high levels of violent rhetoric against women (Hoffman et al., 2020; Ribeiro et al., 2020). Given these data and the association between identity fusion and extreme behavior (Swann et al., 2012), in Study 1, we expected that men active in incel communities would score higher on identify fusion than both nonincel men known to espouse misogyny online (i.e., MRM members), and male members of a non–gender-based community (New England Patriots fans) that is nonetheless male dominated. As control variables, we also measured hostile sexism, frequency of website visitation, and agreement with group worldviews.

### Method

*Participants.* Participants were 155 men, recruited from Reddit ($n = 74$) or MTurk ($n = 81$), who indicated being currently active in one of three online communities: incels ($n = 40$; 11 from Reddit, 29 from MTurk), MRMs ($n = 52$; all from MTurk), or Patriots fans ($n = 63$; all from Reddit). The MTurk sample consisted entirely of men from the United States; we do not have data on the nationality of the participants from Reddit. The sample size afforded .80 power ($α = .05$) to observe a medium or larger group effect ($f ≥ .25$; Faul et al., 2009). Reddit volunteers followed links on two subreddits (r/MensRights, r/Patriots) and received no compensation; those recruited from MTurk answered questions about incels and MRMs embedded in a larger

survey in exchange for $0.50. Men ranged in age from 18 to 51 ($Md = 30$) and were White (77.7%), Black (12.4%), Asian (5.8%), Indigenous (3.3%), "other" (2.5%), and Latino (9.4%). Most reported some college education (78.7%) and were employed (87.3%), with a median income of US$50,000 to US$59,999.

*Procedure.* All procedures (in this and subsequent studies) were institutional review board (IRB)-approved and met ethical and legal requirements of the study country. The survey was hosted online on Qualtrics. After giving informed consent, men read descriptions of incel, MRM, or New England Patriots fan communities and indicated whether they were "an active member on one or more" specific community websites (we only analyzed data of those answering "yes"). Participants completed the scales below; those recruited from MTurk first completed scales about status and sexism (see https://osf.io/sg3wt/).

*Measures.* Items below referencing "[group]" were matched to the participant's group ("the Men's Rights Movement," "incels," "Patriots fans"). See the Supplemental Materials document (Section 1) for the full text of the measures below. Here and in subsequent studies, all scale scores were averaged. Table 1 shows Cronbach's alphas, correlations, and descriptive statistics.

*Frequency.* On a scale of 1 (*never*) to 9 (*more than once per day*), participants answered "How often do you visit any websites associated with [group]?"

*Agreement.* On scales of 1 (*not at all*) to 7 (*completely*), participants rated "How much do you tend to agree with the opinions expressed by members of these [group] communities?" and "How much do you feel you relate to the worldviews communicated on these [group] sites?"

*Hostile Sexism.* The 11-item hostile sexism subscale of Glick and Fiske's (1996) Ambivalent Sexism Inventory

**Table 2.** One-Way ANOVA and ANCOVA Output Comparing Incels, MRMs, and Patriots Fans, Study 1.

| Variable | Group mean (*SE*) | | | *F* test | $\eta_p^2$ [90% CI] |
|---|---|---|---|---|---|
| | Incels | MRMs | Patriots | | |
| Hostile sexism | 4.04 (0.16)[a] | 3.42 (0.13)[b] | 2.64 (0.17)[c] | $F(2, 118) = 18.17$*** | .235 [.124, .330] |
| Identity fusion | 4.36 (1.91)[a] | 2.49 (1.57)[b] | 3.52 (1.56)[a] | $F(2, 127) = 13.96$*** | .180 [.082, .269] |
| Frequency | 4.58 (0.26)[a] | 1.98 (0.22)[b] | 8.19 (0.20)[c] | $F(2, 152) = 214.28$*** | .738 [.679, .777] |
| Agreement | 4.50 (0.20)[a] | 3.58 (0.18)[b] | 4.57 (0.16)[a] | $F(2, 152) = 9.73$*** | .114 [.041, .189] |
| Identity fusion (controlling frequency, agreement, and sample) | 4.04 (0.21)[a] | 3.24 (0.27)[b] | 2.85 (0.37)[b] | $F(2, 124) = 7.04$*** | .102 [.027, .182] |
| Hostile sexism (controlling frequency, agreement, and sample) | 4.00 (0.14)[a] | 3.92 (0.17)[a] | 1.86 (0.28)[b] | $F(2, 115) = 21.02$*** | .268 [.151, .363] |

*Note.* Differing *df*s across analyses reflect missing data. Different superscripts (a, b, c) within the same row indicate means that differ significantly based on Tamhane's (1979) post hoc tests. CI = confidence interval. ANOVA = analyses of variance; ANCOVA = analysis of covariance; MRM = Men's Rights Movement.
***$p < .001$.

measures angry, insulting beliefs about women (e.g., "Women seek to gain power by getting control over men"). Items are rated on scales of 1 (*strongly disagree*) to 6 (*strongly agree*).

*Identity Fusion.* The 7-item identity fusion scale (Gómez et al., 2011) measures feelings of fusion with the group (e.g., "I am one with [group]," "I'll make [group] strong"). Items are rated on scales of 1 (*totally disagree*) to 7 (*totally agree*).

*Demographics.* Participants indicated their age, race, ethnicity, education, employment status, and household income.

## Results

Did men active in incel communities differ from the comparison groups on identity fusion, hostile sexism, and relationship to their online communities? One-way analyses of variance (ANOVAs) on identity fusion, hostile sexism, frequency, and agreement yielded large to very-large effects of group on all dependent measures (see Table 2). Tamhane's (1979) post hoc tests revealed that men active in incel communities were more identity fused than MRMs ($p < .001$, 95% confidence interval (CI): [0.941, 2.796]), although they did not differ from Patriots fans ($p = .110$, 95% CI [−0.132, 1.808]). Men active in incel communities were also higher in hostile sexism than MRMs ($p = .006$, 95% CI [0.148, 1.094]) and Patriots fans ($p < .001$, 95% CI [0.827, 1.981]); they visited group websites more frequently than MRMs ($p < .001$, 95% CI [1.486, 3.703]) and less frequently than Patriots fans ($p < .001$, 95% CI [-4.694, -2.537]); and they agreed with their group's worldviews more than MRMs ($p = .019$, 95% CI [0.121, 1.725]) and comparably to Patriots fans ($p = .992$, 95% CI [−0.770, 0.627]).

Because men were recruited from two different platforms—Reddit and MTurk—we conducted *t*-tests to determine if these samples differed meaningfully on any variables (differing *df*s across tests reflect missing data from Reddit

participants). Reddit and MTurk samples did not differ significantly on hostile sexism, $t(56.81) = −1.82$, $p = .074$, but Reddit (vs. MTurk) participants reported higher levels of identity fusion, $t(111.78) = 2.19$, $p = .030$, $d = 0.38$, 95% CI [0.026, 0.741], much more frequent website visits, $t(144.43) = 22.41$, $p < .001$, $d = 3.55$, 95% CI [3.040, 4.055], and stronger agreement with their group's worldviews, $t(132.64) = 4.01$, $p < .001$, $d = 1.30$, 95% CI [0.307, 0.941]. Note that these findings largely reflect differences between Patriots fans (all recruited from Reddit) and MRMs (all recruited from MTurk), as group and sample were entirely confounded for these individuals.

Given these sample differences, we conducted additional analyses of covariance (ANCOVAs; see Table 2) that controlled for sample (Reddit vs. MTurk), as well as for group differences in website visitation frequency and agreement with the group's worldviews, both of which might plausibly explain some of the variance in fusion and hostile sexism levels. The ANCOVA on identity fusion revealed that men active in incel communities had higher identity fusion than both MRMs ($p = .011$, 95% CI [0.183, 1.403]) and Patriots fans ($p < .012$, 95% CI [0.263, 2.113]). The ANCOVA on hostile sexism revealed that men active in incel communities were higher in hostile sexism than Patriots fans ($p < .001$, 95% CI [1.476, 2.793]), whereas they did not differ from MRMs ($p = .723$, 95% CI [−0.348, 0.500]).

Together, these findings make several important points. First, men active in incel communities—like men active in other MRM communities—endorse relatively high levels of hostile sexism. Second, men active in incel communities display notably higher levels of identity fusion than men in other groups. Third, these patterns emerge when controlling for differences in website visitation frequency, agreement with the group's worldviews, and sample (Reddit vs. MTurk), indicating that the heightened identity fusion of men active in incel communities does not merely reflect more frequent exposure to, or agreement with, the group's worldviews.

Given the high levels of identity fusion apparent in online incel communities, we view these communities as suitable populations for testing our model.

## Study 2

In Study 2, we tested our theoretical model (self-verification from the group predicts pro-group violence endorsement, indirectly via fusion to the group) on self-identified incels who were sampled using stringent eligibility criteria and rigorous recruitment strategies (see below). To establish generalizability, we used two different measures of self-verification from other incels and we examined two violence-related outcomes: Endorsement of future violence against women and endorsement of Elliot Rodgers' past violence on behalf of incels.

### Method

*Participants and Procedure.* Participants, recruited from MTurk, were eligible if they were men, U.S. residents, self-identified as incels, and correctly answered several screener questions about incel culture (e.g., "What is the name of the incel worldview?"). They received $0.05 to take a screening survey and $1.20 for completing the full survey. We took several steps to validate respondents' incel status and prevent fraudulent responses; see Supplemental Materials (section 2) for full details. Nonetheless, we acknowledge that defining "true incel" status is challenging, even for incels themselves, who often debate their defining criteria on their forums (Kim, 2022). For instance, not all incels conform to elements of the Blackpill ideology that discourage attempts to improve one's relationship success via financial or social accomplishments (Klee, 2022). More-over, some "ethnicels" (incels who belong to a minority race or ethnicity) consider racism a key element that, in addition to their physical unattractiveness, makes women unwilling to date them (Kesvani, 2019). To circumvent these issues, we took a social identity approach by allowing individuals to define their own social group membership (Tajfel & Turner, 1979).

The final sample ($n$ = 113) afforded us .90 power ($\alpha$ = .05) to detect statistically significant indirect effects of self-verification on violence endorsement via identity fusion (Schoemann et al., 2017; see Supplementary Material, Section 3). Participants ranged in age from 18 to 51 ($Md$ = 30), and were White (35.4%), Black (54.9%), Asian (2.7%), Indigenous (2.7%), "other" (4.4%), and Latino (62.8%). (Note that although some samples of incels are majority White [e.g., Moskalenko, González, et al., 2022], other samples are more racially diverse [e.g., Høiland, 2019].) About half of participants reported a college degree (53.1%) and were employed (96.5%), with a median socioeconomic status ($Md$ = 3.00) corresponding to "middle class." They completed the scales below (and several additional scales; see https://osf.io/sg3wt/) online via Qualtrics.

*Measures.* Identity fusion and agreement were measured identically to Study 1. See Table 3 for Cronbach's alphas, correlations, and descriptive statistics. We transformed non-normal variables (see Supplementary Material, Section 4).

*Self-Views.* Pelham and Swann's (1989) Self-Attributes Questionnaire (SAQ) measures self-views on 10 traits (*intellectual/academic*, *social*, *artistic/musical*, *sports*, *physical attractiveness*, *leadership*, *common sense*, *emotional stability*, *luck*, *discipline*). Respondents rate themselves on each trait "relative to other men in the U.S. the same age as you" on scales of 0% (*better than 0%*) to 100% (*better than 99%*).

*Self-Verification.* We measured global and specific self-verification. *Global self-verification* reflects a generalized, felt sense of being verified. To measure this, participants used 7-point scales to answer "To what extent do other incels see you as you see yourself?" (endpoints = *not at all the same* and *exactly the same*), and "To what extent do other incels agree with you about how you rate your personality?" and "To what extent do other incels agree with you about how you rate your looks?" (endpoints = *disagree completely* and *agree completely*). We averaged these three items. *Specific self-verification*, in contrast, quantifies perceived verification at the level of specific self-views. To measure this, participants viewed the 10 SAQ traits described above and rated, for each trait, "how *other incels* see you relative to *other men* your own age" on scales of 0% (*better than 0%*) to 100% (*better than 99%*). We took the absolute values of 10 difference scores (self-views minus other incels' appraisals) and averaged them, so higher scores indicated lower self-verification.

*Group Identification.* Ellemers et al.'s (1999) 6-item scale measures group identification (e.g., "I identify with other incels"). Items are rated on scales of 1 (*not at all*) to 7 (*very much*). We reverse-coded relevant items, and dropped one item that reduced alpha.

*Endorsement of Violence Against Women.* We measured *endorsement of future violence against women* (*future violence* for short) with five items modified from Ascher (1986), e.g., "Incels can only take so much abuse from women—then it is psychologically impossible not to retaliate" and "If incels' rebellion requires violence against women, then violence is necessary." We measured *endorsement of past violence against women* (*past violence* for short) by describing Elliot Rodgers' actions ("He killed 7 people . . . motivated by romantic rejection") and assessing agreement with four statements (e.g., "Elliot Rodger was a hero," "More incels should do what Elliot Rodger did") on scales of 1 (*strongly disagree*) to 7 (*strongly agree*).

**Table 3.** Correlations and Descriptive Statistics for Study 2 Variables.

| Variable | Self-views | Global SV | Specific SV | Identity fusion | Group ident. | Future violence | Past violence | Frequency | Agreement | Length |
|---|---|---|---|---|---|---|---|---|---|---|
| Self-views | — | .432*** | −.672*** | .331*** | .296** | .450*** | .530*** | −.191* | .204* | .105 |
| Global self-verification | | — | −.243** | .769*** | .535*** | .627*** | .545*** | .161 | .766*** | −.034 |
| Specific self-verification | | | — | −.233* | −.264** | −.190* | −.306*** | .046 | −.078 | −.076 |
| Identity fusion | | | | — | .787*** | .674*** | .652*** | .390*** | .825*** | .030 |
| Group identification | | | | | — | .426*** | .424*** | .434*** | .654*** | .160 |
| Future violence | | | | | | — | .904*** | .064 | .562*** | .066 |
| Past violence | | | | | | | — | −.006 | .449*** | .150 |
| Frequency | | | | | | | | — | .432*** | .055 |
| Agreement | | | | | | | | | — | −.039 |
| Length | | | | | | | | | | — |
| α | .921 | .753 | .812 | .910 | .645 | .858 | .932 | .664 | .803 | — |
| M | 76.238 | 5.478 | 9.373 | 5.368 | 4.864 | 5.276 | 5.049 | 5.155 | 5.522 | 37.035 |
| SD | 13.188 | 0.950 | 6.012 | 1.059 | 0.801 | 1.181 | 1.545 | 1.676 | 0.978 | 30.408 |
| Skew | −0.714 | −1.120 | 1.362 | −1.592 | −1.527 | −1.393 | −1.607 | 0.059 | −1.453 | 1.868 |
| Kurtosis | −0.099 | 1.539 | 2.228 | 3.870 | 6.863 | 1.811 | 1.803 | 0.338 | 3.526 | 5.480 |
| Skew (transformed) | — | −0.547 | 0.160 | −0.666 | 0.123 | −0.748 | −0.912 | | −0.632 | 0.252 |
| Kurt. (transformed) | — | −0.077 | 0.873 | 0.192 | 3.712 | −0.138 | 0.020 | | 0.202 | 0.727 |

*Note.* Length is in months. Skew and kurtosis (transformed) were calculated after squaring negatively skewed variables and square root transforming positively skewed variables. SV = self-verification; Group ident. = group identification; Kurt. = Kurtosis.
*$p < .05$. **$p < .01$. ***$p < .001$.

*Frequency, Length.* Participants indicated how often they visited and posted on incel websites (1 [*never*] to 9 [*more than once per day*]) and how long (years, months, weeks) they had been active in incel communities.

*Attention Checks, Additional Screeners.* Two attention check items were placed throughout the survey; all participants passed these. Toward the end of the survey, participants answered ("yes"/"no") whether they identified as an incel and as a man (after reassurance they would receive payment regardless). We only retained data of incel-identified men.

*COVID and BLM Anxiety.* Data collection ran from December, 2019; through July, 2020 which spanned both the spread of COVID-19 and the widely publicized Black Lives Matter (BLM) protests. We thought it is possible that anxiety related to these events might influence participants' responses to our survey and thus we added five items related to each event midway through data collection (e.g., "I had trouble falling or staying asleep because I was thinking about the coronavirus [BLM protests]"; Lee, 2020). Items were rated on scales of 0 (*not at all*) to 4 (*nearly every day*) and we averaged them (COVID: α = .82; BLM: α = .84) for use as covariates in analyses.

*Demographics.* Participants indicated age, race, ethnicity, education, employment status, and socioeconomic status.

## Results

Do self-identified incels report negative self-views, especially on physical attractiveness? No. Figure 1 shows mean percentile ratings above the 70th percentile on all 10 traits.

Thus, we found evidence of an above-average effect (Zell et al., 2020) among self-identified incels.

Given the strong correlations between global self-verification and identity fusion in this and the next study (see Tables 3 and 4), we used confirmatory factor analyses (CFAs) to establish that these are separate constructs. In both studies, a two-factor model treating global self-verification and identity fusion as separate factors was a significantly better fit to the data than a single-factor model, indicating that these are distinct constructs (Study 2: $\chi^2[1] = 8.04, p = .005$; Study 3: $\chi^2[1] = 36.05, p < .001$; see Supplementary Material, Section 5, Table S4.)

Does self-verification from other incels predict endorsement of future and past violence, indirectly through identity fusion? We used Hayes's (2022) PROCESS macro (Model 4), with 10,000 bootstrapped samples, to answer this. Note that we used $P_M$, the ratio of the completely standardized indirect effect to the completely standardized total effect, to assess the magnitude of indirect effects (Alwin & Hauser, 1975; MacKinnon & Dwyer, 1993; Wen & Fan, 2015). Although criticized for sometimes providing misleading practical estimates (see Preacher & Kelley, 2011), $P_M$ allows for meaningful evaluation of the magnitude of the indirect effect when considered in the context of the total effect (Wen & Fan, 2015). Because we transformed certain variables, in the main text and figures, for all statistically significant indirect effects, we report the completely standardized regression coefficients, the unstandardized and completely standardized indirect effects, the completely standardized total effect, and $P_M$. We report the unstandardized regression coefficients, their standard errors, and confidence intervals in the Supplemental Materials (see Supplementary Material, Section 6, Table S5 for Study 2, and Table S6 for Study 3).
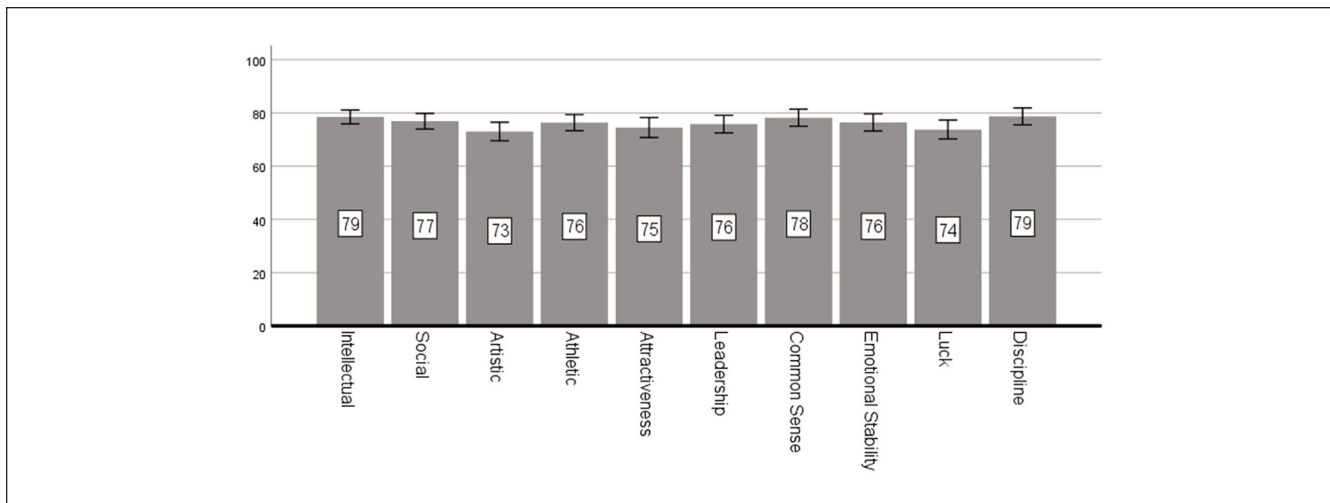
**Figure 1.** Mean Self-View Percentile Ratings on 10 Traits, Study 2.

**Table 4.** Correlations and Descriptive Statistics for Study 3 Variables.

| Variable | Self-views | Narciss. | Global SV | Identity fusion | Group ident. | Future violence | Past violence | Harass. women | Freq. | Agree. | Length |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Self-views | — | .398*** | .436*** | .347*** | .340*** | .474*** | .478*** | .402*** | −.004 | .415*** | −.108 |
| Narcissism | | — | .580*** | .596*** | .557*** | .634*** | .520*** | .564*** | .147* | .610*** | −.044 |
| Global self-verification | | | — | .715*** | .630*** | .646*** | .579*** | .507*** | .217*** | .694*** | .008 |
| Identity fusion | | | | — | .795*** | .669*** | .649*** | .584*** | .188** | .668*** | .012 |
| Group identification | | | | | — | .611*** | .610*** | .551*** | .293*** | .679*** | .011 |
| Future violence | | | | | | — | .761*** | .708*** | .135* | .707*** | .028 |
| Past violence | | | | | | | — | .674*** | .137* | .568*** | .011 |
| Harassment of women | | | | | | | | — | .264*** | .614*** | −.036 |
| Frequency | | | | | | | | | — | .311*** | .123* |
| Agreement | | | | | | | | | | — | .042 |
| Length | | | | | | | | | | | — |
| α | .915 | .750 | .774 | .896 | .608 | .835 | .940 | .860 | .664 | .788 | — |
| M | 71.069 | 3.866 | 5.360 | 5.328 | 4.802 | 5.121 | 4.980 | 3.216 | 5.306 | 5.461 | 39.432 |
| SD | 16.483 | 0.717 | 1.015 | 1.023 | 0.978 | 1.117 | 1.545 | 1.094 | 1.732 | 1.021 | 31.209 |
| Skew | −0.965 | −0.988 | −0.741 | −1.179 | −0.489 | −0.768 | −1.295 | −0.939 | 0.099 | −0.876 | 1.670 |
| Kurtosis | 1.251 | 1.665 | 0.457 | 2.546 | 1.407 | 0.978 | 1.187 | 0.943 | −0.565 | 1.282 | 2.892 |
| Skew (trans.) | — | — | — | −0.278 | — | −0.452 | — | — | — | — | 0.479 |
| Kurt. (trans.) | — | — | — | 0.279 | — | −0.329 | — | — | — | — | 0.663 |

*Note.* Length is in months. Skew and kurtosis (transformed) were calculated after squaring negatively skewed variables and square root transforming positively skewed variables. Narciss. = Narcissism; SV = Self-verification; Group ident. = Group identification; Harass. women = Harassment of women; Freq. = Frequency; Agree. = Agreement; Skew (trans.) = Skew (transformed); Kurt. (trans.) = Kurtosis (transformed).
*$p < .05$. **$p < .01$. ***$p < .001$.

Looking first at global self-verification, Figure 2 shows that global self-verification predicted identity fusion, identity fusion predicted future violence endorsement (Figure 2, Panel A) and past violence endorsement (Figure 2, Panel B), and the indirect effects of global self-verification on both violence endorsement measures through identity fusion were significant (confidence intervals did not straddle 0).

Turning next to specific self-verification, however, the findings were weaker. Specific self-verification did not significantly predict identity fusion, $\beta = -0.174$, $SE = 0.093$, 95% CI [−0.360, 0.011]; and although identity fusion significantly predicted both future violence endorsement, $\beta = 0.714$, $SE = 0.067$, 95% CI [0.582, 0.846], and past violence endorsement, $\beta = 0.682$, $SE = 0.067$, 95% CI [0.549, 0.814], neither indirect effect reached significance, $\beta = -0.125$, $SE = 0.094$, 95% CI [−0.317, 0.057], $P_M = 0.701$; $\beta = -0.119$, $SE = 0.090$, 95% CI [−0.297, 0.059], $P_M = 0.441$, respectively. Interestingly, the indirect effects of specific self-verification on endorsement of future and past violence against women reached significance when analyzing the nontransformed data (see Supplementary Material, Section 4, Table S2). Nonetheless,
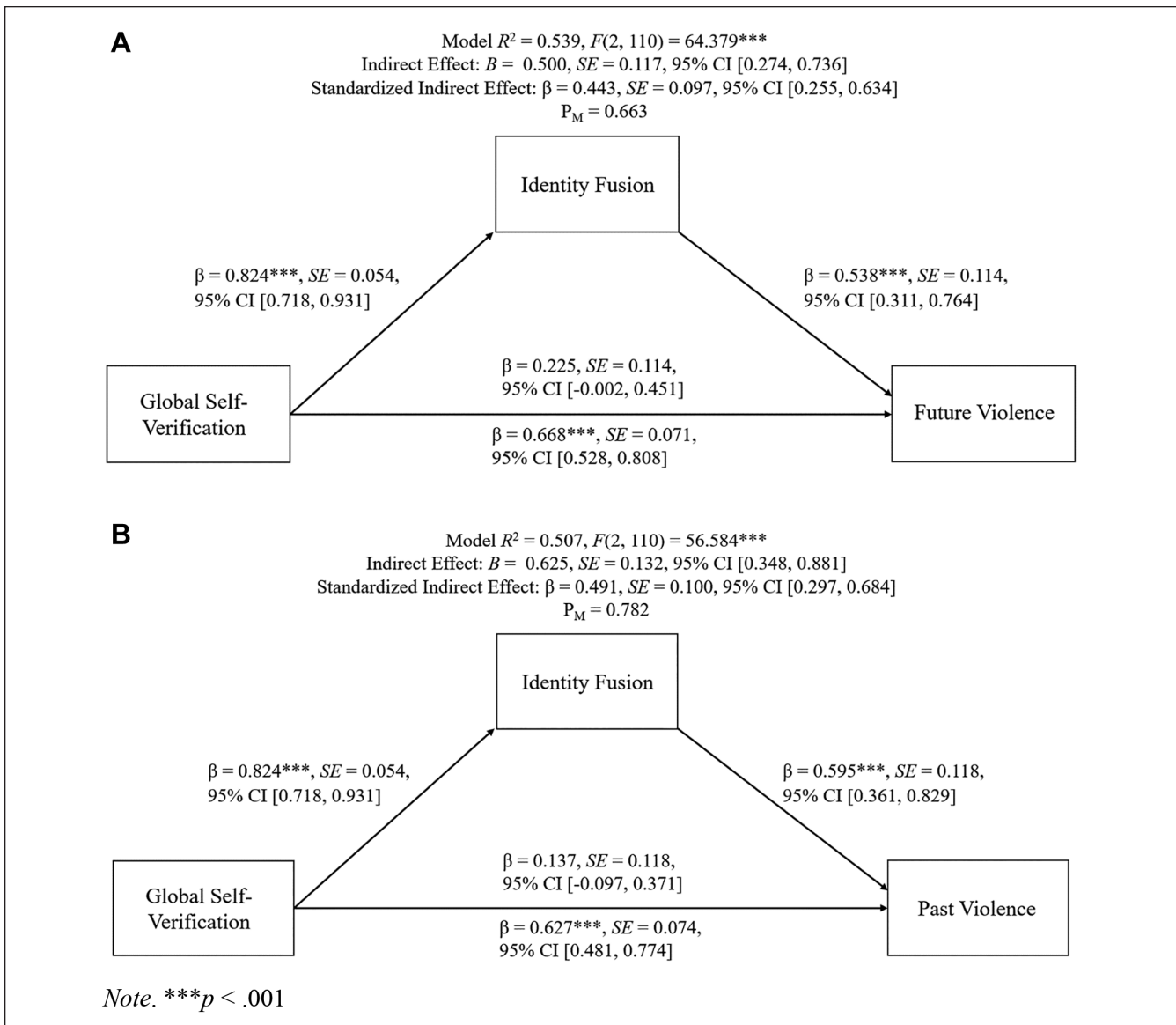
**Figure 2.** Global Self-Verification Indirectly Predicts Future Violence (Panel A) and Past Violence (Panel B) Via Identity Fusion in Study 2.
*Note.* CI = confidence interval.
\*\*\*p < .001.

global self-verification robustly outperformed specific self-verification in these analyses.

Additional analyses (see Supplementary Material, Section 7, Table S7) showed that the indirect effects of global self-verification on violence endorsement via identity fusion were robust to various controls, which we entered one at a time in separate models. Specifically, the indirect effects emerged when controlling for: group identification, positivity of self-views, frequency of website visitation, agreement with worldviews, length of incel membership, COVID anxiety, and BLM anxiety (see Supplementary Material, Section 7, Table S8 for covariate analyses with specific self-verification).

Furthermore, in alternate models, we tested indirect effects of identity fusion on violence endorsement via global self-verification. The indirect effect on future violence via global self-verification was not significant ($B = 0.202$, $SE = 0.116$, 95% CI [−0.019, 0.435], $\beta = 0.185$, $SE = 0.105$, 95% CI [−0.018, 0.389], $P_M = 0.256$), nor was the indirect effect on past violence via global self-verification ($B = 0.139$, $SE = 0.129$, 95% CI [−0.102, 0.404], $\beta = 0.113$, $SE = 0.102$, 95% CI [−0.084, 0.317], $P_M = 0.159$). Thus, our theoretical model fit the data better than alternate models that reversed the roles of global self-verification and identity fusion (see Supplementary Material, Section 8, for alternate models with specific self-verification).

To ensure that the key effect was not driven primarily by self-enhancement strivings (i.e., men with especially positive self-views seeking positive appraisals), we used Hayes's (2022) PROCESS macro (Model 7) to test moderated (statistical) mediation effects, entering self-views as a moderator. We found no evidence that the indirect effect of global self-verification on violence endorsement via fusion was moderated by self-views, whether predicting future violence ($B = 0.002$, $SE = 0.003$, 95% CI [−0.003, 0.010]) or past violence ($B = 0.003$, $SE = 0.004$, 95% CI [−0.004, 0.011]; see Supplementary Material, Section 7, for output from models using specific self-verification). Thus, the indirect effect of global self-verification on violence endorsement via identity fusion was similarly strong among self-identified incels across the entire range of self-views.

## Study 3

In Study 2, self-identified incels who felt more verified by other incels also endorsed more violence against women via increased identity fusion. This effect emerged across two measures of violence endorsement, stood up to multiple control variables, and was equally strong regardless of the positivity or negativity of incels' self-views. However, the effect only emerged robustly when we operationalized self-verification as a global, felt sense of being verified; when self-verification was defined at the level of specific self-views, effects were substantially weaker, emerging as significant only with the nontransformed data. Thus, in Study 3 (preregistered: https://osf.io/efmx3), we restricted our analyses to global self-verification. The goals of Study 3 were to replicate Study 2's findings and extend them by measuring participants' recent online harassment of women.

We also followed up on evidence in Study 2 that self-identified incels displayed two qualities suggestive of narcissism: very positive self-views, and a desire to retaliate in response to perceived slights from women (Back et al., 2013). In fact, the sheer positivity of self-views reported in Study 2—by men presumably defined by their deficits of attractiveness—seems consistent with the exalted but fragile self-views of individuals high in narcissism (Morf & Rhodewalt, 2001). To determine if narcissism plays a role in the misogyny espoused by self-identified incels, we assessed this variable in Study 3. We reasoned that self-identified incels who are high in narcissism may be especially appreciative of self-verification insofar as chronic rejection by women makes them feel misunderstood and unfairly undervalued (Ging, 2019). For such individuals, group membership may be particularly effective at verifying the personal identities that make incels unique while also verifying their collective identities as incels (Gómez et al., 2009). If so, then incels high in narcissism may be especially likely to fuse to the group and endorse its misogynistic ideologies.

## Method

*Participants and Procedure.* We recruited self-identified incel men from MTurk using the same eligibility criteria and recruitment strategies as in Study 2. Men received $0.05 to take the screener and $1.00 for completing the full survey. We deleted data from 23 men who failed an attention check, leaving $n = 283$ men. This afforded us 0.99 power to detect the hypothesized indirect effects (see Supplementary Material, Section 3). Participants ranged in age from 18 to 51 ($Md = 32$), and were White (75.6%), Latino (27.3%), Black (19.1%), Asian (4.2%), Indigenous (0.4%), multiracial (0.4%), "other" (0.4%). Most reported some college education (56.9%) and were employed (92.9%), with a median socioeconomic status ($Md = 3.00$) corresponding to "middle class." They completed the scales below (and several additional scales; see https://osf.io/sg3wt/) online via Qualtrics.

*Measures.* Most scales, items, and scoring procedures were identical to those used in Study 2 and are only mentioned here if they differed. We removed items assessing anxiety about the BLM movement, given that media attention to this movement had diminished by the time we collected data. See Table 4 for Cronbach's alphas, correlations, and descriptive statistics. We transformed non-normal variables (see Supplementary Material, Section 4), and as noted earlier, used CFAs to establish that global self-verification and identity fusion are distinct (see Supplementary Material, Section 5, Table S4).

*Group Identification.* For brevity, we used only four group identification items.

*Recent Online Harassment of Women.* We wrote four items assessing recent online harassment of women. Three asked "In the last month, how often have you shared, liked, upvoted, or retweeted a post that [made fun of women/expressed anger toward a woman (or toward women in general)/promoted aggression toward a woman (or toward women in general)]?" The fourth asked "In the last month, how often have you sent provocative messages to a woman online with the intention of making her uncomfortable?" Items were rated on scales of 0 (*not at all*) to 5 (*more than once per day*), and we averaged them.

*Narcissism.* Jonason and Webster's (2010) four narcissism items (e.g., "I tend to want others to admire me") are rated on scales of 1 (*strongly disagree*) to 5 (*strongly agree*).

## Results

As in Study 2, participants displayed an above-average effect, with mean self-ratings at or above the 66th percentile on all 10 traits.
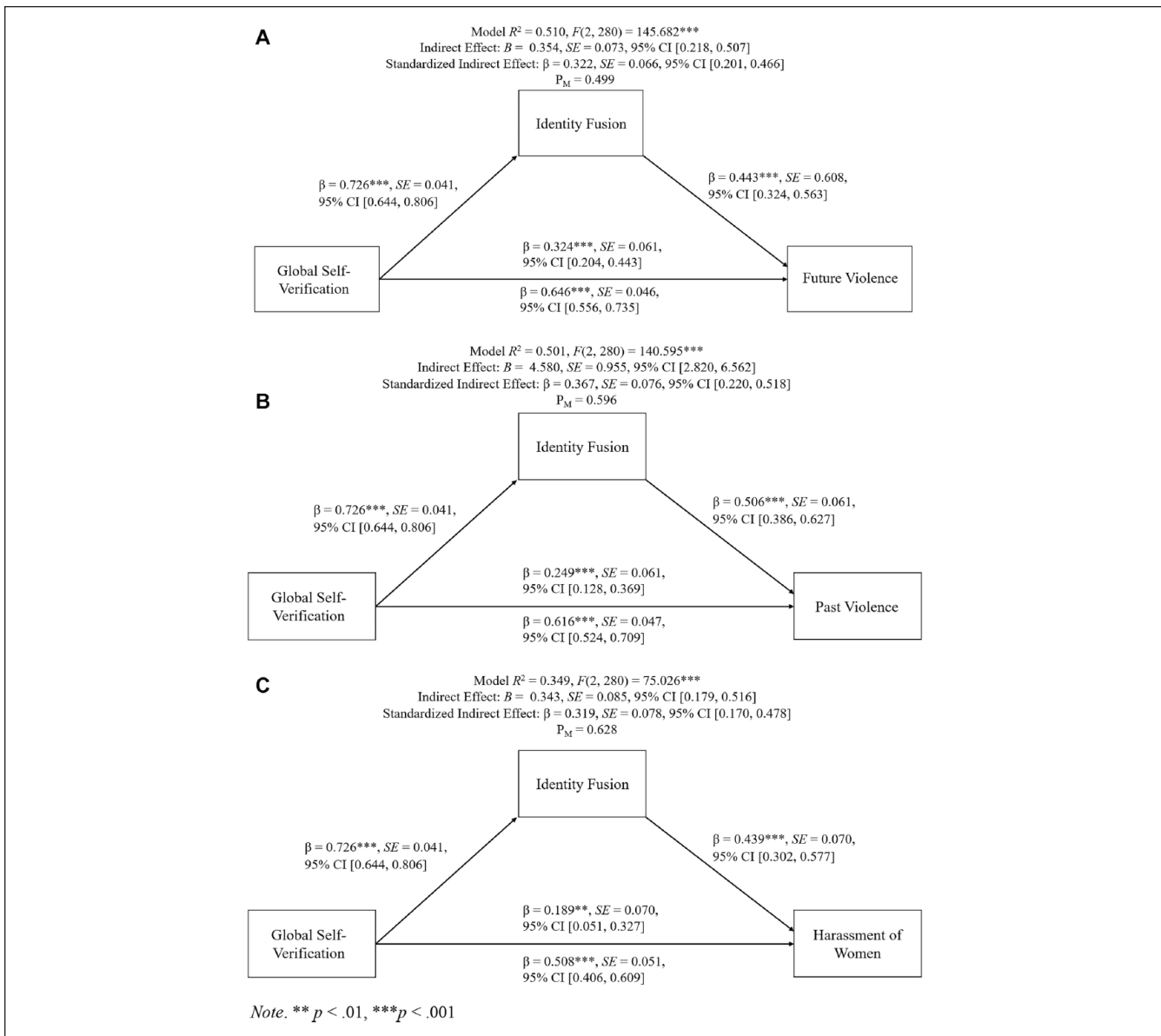
**Figure 3.** Global Self-Verification Indirectly Predicts Future Violence (Panel A), Past Violence (Panel B), and Online Harassment of Women (Panel C), Via Identity Fusion in Study 3.
*Note.* CI = confidence interval.
**$p < .01$. ***$p < .001$.

We used the analytic strategy described in Study 2 to test whether global self-verification from incels predicted endorsement of violence, and online harassment of women, indirectly through identity fusion. Figure 3 shows that global self-verification predicted identity fusion, identity fusion predicted the three violence-related outcomes, and the indirect effects through identity fusion were all significant. All indirect effects remained significant when controlling for group identification, self-views, frequency, agreement, length, and COVID anxiety, entered one at a time in separate models (see Supplementary Material, Section 7, Table S9).

In alternate models, we tested indirect effects of identity fusion on violence endorsement and harassment via global self-verification. In models predicting endorsement of future and past violence, the indirect effects were significant but smaller than in the hypothesized models (future violence: $B = 0.027$, $SE = 0.008$, 95% CI [0.011, 0.043], $\beta = 0.235$, $SE = 0.067$, 95% CI [0.101, 0.363], $P_M = 0.346$, $\beta_{total} = 0.679$; past violence: $B = 0.232$, $SE = 0.091$, 95% CI [0.056, 0.413], $\beta = 0.181$, $SE = 0.070$, 95% CI [0.042, 0.317], $P_M = 0.263$, $\beta_{total} = 0.687$). In the model predicting harassment of women, the indirect effect was not significant ($B = 0.015$, $SE = 0.009$, 95% CI [−0.001, 0.033], $\beta = 0.137$, $SE = 0.077$,

**Table 5.** Indirect Effects of Self-Verification on Violence Endorsement Via Identity Fusion, at Low and High Narcissism (Study 3).

| Narcissism level | Future violence | | Past violence | | Harassment of women | |
|---|---|---|---|---|---|---|
| | B (SE) | 95% CI | B (SE) | 95% CI | B (SE) | 95% CI |
| Low narcissism | 0.249* (0.058) | [0.141, 0.366] | 3.223* (0.775) | [1.778, 4.805] | 0.242* (0.067) | [0.115, 0.380] |
| High narcissism | 0.322* (0.074) | [0.191, 0.483] | 4.164* (0.958) | [2.425, 6.210] | 0.312* (0.083) | [0.160, 0.486] |
| Controlling for self-views | | | | | | |
| Low narcissism | 0.247* (0.051) | [0.149, 0.349] | 3.203* (0.719) | [1.866, 4.691] | 0.240* (0.063) | [0.118, 0.367] |
| High narcissism | 0.318* (0.063) | [0.010, 0.108] | 4.126* (0.864) | [2.551, 5.934] | 0.309* (0.077) | [0.163, 0.465] |

*Note.* Low and high levels of narcissism were ±1 *SD* from the mean. CI = confidence interval.
*$p < .05$.

95% CI [−0.007, 0.290], $P_M = 0.238$). Thus, our theorized model was most consistent with the data.

In exploratory analyses, we asked if these effects were moderated by narcissism. When narcissism was entered as a moderator, the index of moderated (statistical) mediation was significant in models predicting future violence ($B = 0.051$, $SE = 0.027$, 95% CI [0.011, 0.118]), past violence ($B = 0.655$, $SE = 0.342$, 95% CI [0.151, 1.491]), and harassment of women ($B = 0.049$, $SE = 0.026$, 95% CI [0.010, 0.112]). In all models, indirect effects (global self-verification predicting violence via identity fusion) were stronger among those high than low in narcissism (see Table 5), although indirect effects were significant at both narcissism levels. Moreover, these effects remained significant when controlling for self-identified incels' self-views (see Table 5).

As in Study 2, we also explored whether self-views (the SAQ) moderated the indirect effects of global self-verification on violence endorsement and harassment via identity fusion. Although this moderated mediation effect was not significant in Study 2, it was significant in Study 3 for all three outcome variables (future violence endorsement: $B = 0.004$, $SE = 0.002$, 95% CI [0.001, 0.008]; past violence endorsement: $B = 0.06$, $SE = 0.02$, 95% CI [0.017, 0.098]; harassment of women: $B = 0.004$, $SE = 0.002$, 95% CI [0.001, 0.008]). In all models, the indirect effect was significant across the entire range of self-views (all *p*s < .05), but it was stronger among men with more favorable self-views. Thus, the pattern with self-views mimicked that found when narcissism was treated as a moderator. We suspect that this is due to the moderately strong correlation ($r = .40$, $p < .001$) between SAQ and narcissism scores.

## General Discussion

Aggrieved by what they perceive to be an unjust lack of access to romantic and sexual partners, incels are known to advocate, and sometimes enact, violent retribution against women. In this article, we show that several distinct social psychological processes predict these activities. One such process is the tendency for incels to become deeply aligned ("fused") with online incel communities. Indeed, self-identified incels reported higher levels of identity fusion with their

group than members of other male-dominated groups (Study 1). Follow-up studies traced the potential roots of these feelings of fusion (Studies 2 and 3). Across two independent samples of self-identified incels, feeling globally verified by other incels predicted fusion with incels and fusion, in turn, predicted endorsement of violence against, and harassment of, women. Rival pathways provided a weaker fit to our data.

Our findings offer insight into the potential origins of the venomous attitudes that self-identified incels tend to harbor toward women. One source of such attitudes may be online exposure to like-minded individuals who verify incels' conceptions of themselves and of social reality. Although the evidence was somewhat mixed, on balance it appears that verification of incels' positive self-views was particularly potent. That is, although the indirect association of self-verification and violence endorsement through identity fusion was significant among participants with both positive and negative self-views (in Studies 2 and 3), it was statistically stronger among participants with positive self-views (in Study 3). We conjecture that the lack of significant moderation by self-views in Study 2 likely reflected low power due to the smaller sample size ($N = 113$) relative to that in Study 3 ($N = 283$). Furthermore, in Study 3, the paths from self-verification to violence endorsement and harassment of women via identity fusion were strongest among highly narcissistic individuals (who are known to have *overly* positive but fragile self-views; see Morf & Rhodewalt, 2001). Note also that in both Studies 2 and 3, self-identified incels' self-concepts were quite positive (above the 66th percentile), including even their physical attractiveness self-views (the 75th percentile). Furthermore, most self-identified incels (78%) in Studies 2 and 3 reported having sex within the past month (see https://osf.io/sg3wt/).

From our perspective, overly positive, narcissistic self-views can be problematic if they encourage a sense of entitlement. Such entitlement may convince self-identified incels that they deserve more romantic success and sexual activity than they currently experience. Unfortunately, this conviction may foster a sense of dissatisfaction that prevents self-identified incels from establishing and maintaining warm relationships with female romantic partners. Forced to reconcile their lack of success in the dating arena with their tentative beliefs

that they are physically attractive and otherwise deserving of women's attention, would-be incels face a dilemma. The Blackpill ideology, with its narrative about women's shallow values, may provide them with the answer they seek.

We acknowledge that the high rates of positive self-views and sexual activity among self-identified incels in our samples contradict many popular conceptions of incels. Moreover, these findings also seem discrepant with research indicating higher than average levels of depression, anxiety, and autism-spectrum disorders among self-identified incels (Costello et al., 2022; Moskalenko, González, et al., 2022; Speckhard & Ellenberg, 2022). We see two plausible explanations for these contradictory pictures of incels. First, different sampling methods may tap different subsets of self-identified incels. At least some studies reporting high levels of mental illness symptoms and psychiatric diagnoses among self-reported incels have relied on convenience samples drawn from incel forum websites (Moskalenko, González, et al., 2022; Speckhard & Ellenberg, 2022) or Twitter and Facebook (Costello et al., 2022). In contrast, we screened for self-identified incels using a much larger, more nationally representative sample of adults (Burnham et al., 2018; McCredie & Morey, 2019). Although both sampling methods are effective in identifying sizable samples of self-identified incels, they may nonetheless yield access to different "types" of incels whose self-concepts and life experiences differ in important ways.

Second, defining "true incel" status is intrinsically tricky. Even within incel forums, there are disagreements about who is a "real incel." Incel members deemed insufficiently misanthropic or too sexually successful are sometimes pejoratively labeled "volcels," or voluntary celibates. This label implies that such individuals' lack of romantic success is voluntary, rather than forced on them by immutable characteristics that cause women to reject them (Moonshot, 2020). Unfortunately, we are unable to establish the proportion of volcels in our sample, nor can we comment on the legitimacy of this sub-category of incels. Labeling another incel a "volcel" may be a means of enforcing group boundaries and marginalizing those whose group membership seems questionable. This dynamic could be important, as there is independent evidence that strongly fused individuals who are marginalized by ingroup members may engage in compensatory activities to prove their commitment, including being more willing to fight and die for the group (Gómez et al., 2011). Hopefully, future research will provide more information regarding the criterial attributes of incels and the boundary conditions of the incel phenomenon.

## Nuances, Limitations, and Future Directions

One interesting nuance of our findings is that the measure of global self-verification was a stronger statistical predictor than the measure of specific self-verification. We suspect that this may say more about the measures themselves than the constructs they were designed to assess. Whereas the global measure asks respondents to perform mental calculations themselves ("To what extent do other incels see you as you see yourself?"), the specific measure requires the researcher to compute difference scores. Aside from the fact that difference scores are notoriously unreliable (e.g., Cronbach & Furby, 1970), being verified at a global level is likely more important to people than receiving verification of 10 distinct characteristics (e.g., artistic ability, emotional stability, common sense), particularly since some of these characteristics may be unimportant to some individuals.

Although our sampling method has strengths, it is also limited in some respects. By recruiting self-identified incels through MTurk, we may have unwittingly omitted those incels who display especially high levels of antisocial or dysfunctional tendencies. As such, it is unclear whether our findings will generalize to the most deeply fused incels. That said, we observed meaningfully high levels of endorsement of past and future violence against women (means above 5.0 on 7-point scales), as well as reports of recent online harassment of women corresponding to rates of "several times per week." Insofar as our participants confessed recent and regular online bullying of women, it is important to learn more about such individuals—even if they do not match popular conceptions of incels.

Our reliance on self-reported endorsement of violence also warrants scrutiny. Holding radical beliefs and translating those beliefs into action are distinct processes (McCauley & Moskalenko, 2017), and most people who hold extreme views do not commit violent acts. Nevertheless, violent rhetoric is sometimes associated with violent acts, as in the case of Alek Minassian, a self-identified incel who posted an online message praising Elliot Rodger's actions before he murdered 10 people. Moreover, radicalization within extremist groups that endorse violence—even when one stops short of committing violence—can have serious consequences including interpersonal conflict and alienation from loved ones (Moskalenko, Burton, et al., 2022). Thus, our finding of strong attitudinal endorsement of violence against women is itself important, even if such self-reports do not always translate into real physical violence.

In a similar vein, the measure of online harassment of women was an ad hoc scale designed by the authors for the purposes of this study. As such, this scale did not undergo rigorous construct validation tests, and these results should therefore be interpreted with caution (see Flake & Fried, 2020; Flake et al., 2017). Note that we used this scale because we could not locate a pre-existing scale measuring our precise outcome of interest: episodic recall of the frequency of performing specific misogynistic behaviors online. Despite the drawbacks of using ad hoc scales, we were heartened to see that this scale demonstrated good internal consistency ($\alpha = .860$) and convergent validity (i.e., $r$s = .708 and .674 with endorsement of future and past violence against women, respectively). Moreover, it was moderately correlated with well-validated measures of self-views, narcissism, and identity fusion ($r$s = .402 to .584).

Another limitation of this study is the cross-sectional, correlational nature of our design. Given that such designs cannot capture psychological processes that unfold over time (Fiedler et al., 2018; O'Laughlin et al., 2018), we were only able to assess statistical mediation. Furthermore, we acknowledge recent criticisms of mediation analyses in general, such as the inability to test all theoretically relevant mediators (Fiedler et al., 2018), the difficulty of assessing whether the mediator causes the dependent variable (MacKinnon & Pirlott, 2015), and the biased estimates of indirect effects that result from mediation analyses without manipulations of mediators (Bullock et al., 2010). While our use of a cross-sectional design precludes tests of true mediation, the findings reported here are at least consistent with our theorizing that identity fusion is a mechanism through which self-verification predicts violence endorsement and harassment of women. Our findings, though preliminary, can provide the proof of concept needed to justify more resource- and time-intensive follow-up studies using designs more suitable to testing causal mediation. We therefore encourage researchers to use experimental and longitudinal methods to examine causal pathways among these variables and test for true mediation.

Finally, researchers should examine the effectiveness of interventions designed to reduce self-identified incels' fusion with toxic online communities. Our findings suggest two possible points of intervention: one that addresses self-verification needs, and one that addresses fusion to the group. Interventions targeting self-verification may focus on locating alternative, healthier sources of self-verification for at-risk men who struggle to feel understood and valued. By redirecting their self-verification strivings onto aspects of the self that are associated with achievement and connections to others, at-risk men may discover that they can achieve self-verification without encroaching on others' rights and safety. Similarly, at-risk men can be encouraged to seek connections to individuals or groups that are based on affirming positive human qualities or activities. By fusing with such persons or groups, men will be encouraged to develop their strengths rather than lament their self-perceived shortcomings.

## Conclusion

Besides illuminating the social and personality processes that may underlie the misogyny of self-identified incels, our findings break new theoretical ground by highlighting the synergistic effects of self-verification and identity fusion. Specifically, our findings indicate that self-verification statistically predicts the misogynistic impulses of self-identified incels through heightened identity fusion with the incel group. As such, self-verification and identity fusion may work hand-in-hand to shape the misogynistic inclinations of self-identified incels, and especially among those high in narcissism. Conceivably, this work might point to strategies for encouraging at-risk men to venture down more productive and socially beneficial paths.

## ORCID iDs

Gregory J. Rousis ![iD] https://orcid.org/0000-0001-6668-6218

Jennifer K. Bosson ![iD] https://orcid.org/0000-0003-2566-1078

## Supplemental Material

Supplemental material is available online with this article.

## References

Alwin, D. F., & Hauser, R. M. (1975). The decomposition of effects in path analysis. *American Sociological Review*, *40*(1), 37–47. https://doi.org/10.2307/2094445

Ascher, W. (1986). The moralism of attitudes supporting intergroup violence. *Political Psychology*, *7*(3), 403–425. https://doi.org/10.2307/3791249

Back, M. D., Küfner, A. C. P., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. (2013). Narcissistic admiration and rivalry: Disentangling the bright and dark sides of narcissism. *Journal of Personality and Social Psychology*, *105*(6), 1013–1037. https://doi.org/10.1037/a0034431

Bosson, J. K., & Swann, W. B., Jr. (1999). Self-liking, self-competence, and the quest for self-verification. *Personality and Social Psychology Bulletin*, *25*, 1230–1241. https://doi.org/10.1177/0146167299258005

Brooks, R. C., Russo-Batterham, D., & Blake, K. R. (2022). Incel activity on social media linked to local mating ecology. *Psychological Science*, *33*(2), 249–258. https://doi.org/10.1177/09567976211036065

Bullock, J. G., Green, D. P., & Ha, S. E. (2010). Yes, but what's the mechanism? (Don't expect an easy answer). *Journal of Personality and Social Psychology*, *98*(4), 550–558. https://doi.org/10.1037/a0018933

Burnham, M. J., Le, Y. K., & Piedmont, R. L. (2018). Who is MTurk? Personal characteristics and sample consistency of these online workers. *Mental Health, Religion & Culture*, *21*(9–10), 934–944. https://doi.org/10.1080/13674676.2018.1486394

CCDH Quant Lab. (2022). *The Incelosphere: Exposing pathways into incel communities and the harms they pose to women and children*. Center for Countering Digital Hate. https://counterhate.com/wp-content/uploads/2022/09/CCDH-The-Incelosphere.pdf

Costello, W., Rolon, V., Thomas, A. G., & Schmitt, P. D. (2022). Levels of well-being among men who are incel (involuntarily celibate). *Evolutionary Psychological Science*, *8*, 375–390. https://doi.org/10.1007/s40806-022-00336-x

Cottee, S. (2020). Incel (e)motives: Resentment, shame and revenge. *Studies in Conflict & Terrorism*, *44*, 93–114. https://doi.org/10.1080/1057610X.2020.1822589

Cronbach, L. J., & Furby, L. (1970). How we should measure "change": Or should we? *Psychological Bulletin*, *74*(1), 68–80. https://doi.org/10.1037/h0029382

Daly, S. E., & Reed, S. M. (2022). "I think most of society hates us": A qualitative thematic analysis of interviews with incels. *Sex Roles*, *86*(1), 14–33. https://doi.org/10.1007/s11199-021-01250-5

De La Ronde, C., & Swann, W. B., Jr. (1998). Partner verification: Restoring shattered images of our intimates. *Journal of Personality and Social Psychology*, *75*(2), 374–382. https://doi.org/10.1037/0022-3514.75.2.374

Ellemers, N., Kortekaas, P., & Ouwerkerk, J. W. (1999). Self-categorisation, commitment to the group and group self-esteem as related but distinct aspects of social identity. *European Journal of Social Psychology*, *29*, 371–389. https://doi.org/10.1002/(SICI)1099-0992(199903/05)29:2/3%3C371::AID-EJSP932%3E3.0.CO;2-U

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*(4), 1149–1160. https://doi.org/10.3758/BRM.41.4.1149

Fiedler, K., Harris, C., & Schott, M. (2018). Unwarranted inferences from statistical mediation tests–An analysis of articles published in 2015. *Journal of Experimental Social Psychology*, *75*, 95–102. https://doi.org/10.1016/j.jesp.2017.11.008

Flake, J. K., & Fried, E. I. (2020). Measurement schmeasurement: Questionable measurement practices and how to avoid them. *Advances in Methods and Practices in Psychological Science*, *3*(4), 456–465. https://doi.org/10.1177/2515245920952393

Flake, J. K., Pek, J., & Hehman, E. (2017). Construct validation in social and personality research: Current practice and recommendations. *Social Psychological and Personality Science*, *8*(4), 370–378. https://doi.org/10.1177/1948550617693063

Fredman, L. A., Buhrmester, M. D., Gomez, A., Fraser, W. T., Talaifar, S., Brannon, S. M., & Swann, W. B. (2015). Identity fusion, extreme pro-group behavior, and the path to defusion: Identity fusion and extreme behavior. *Social and Personality Psychology Compass*, *9*(9), 468–480. https://doi.org/10.1111/spc3.12193

Ging, D. (2019). Alphas, betas, and incels: Theorizing the masculinities of the manosphere. *Men and Masculinities*, *22*(4), 638–657. https://doi.org/10.1177/1097184X17706401

Glace, A. M., Dover, T. L., & Zatkin, J. G. (2021). Taking the black pill: An empirical analysis of the "incel." *Psychology of Men & Masculinity*, *22*(2), 288–297.

Glick, P., & Fiske, S. T. (1996). The ambivalent sexism inventory: Differentiating hostile and benevolent sexism. *Journal of Personality and Social Psychology*, *70*(3), 491–512. https://doi.org/10.1037/0022-3514.70.3.491

Gómez, Á., Brooks, M. L., Buhrmester, M. D., Vázquez, A., Jetten, J., & Swann, W. B. (2011). On the nature of identity fusion: Insights into the construct and a new measure. *Journal of Personality and Social Psychology*, *100*(5), 918–933. https://doi.org/10.1037/a0022642

Gómez, Á., Chinchilla, J., Vázquez, A., López-Rodríguez, L., Paredes, B., & Martínez, M. (2020). Recent advances, misconceptions, untested assumptions, and future research agenda for identity fusion theory. *Social and Personality Psychology Compass*, *14*, Article e12531. https://doi.org/10.1111/spc3.12531

Gómez, Á., Seyle, D. C., Huici, C., & Swann, W. B. (2009). Can self-verification strivings fully transcend the self–other barrier? Seeking verification of ingroup identities. *Journal of Personality and Social Psychology*, *97*(6), 1021–1044. https://doi.org/10.1037/a0016358

Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (T. D. Little, Ed., 3rd ed.). Guilford Press.

Hodapp, C. (2017). *Men's rights, gender, and social media*. Rowman & Littlefield.

Hoffman, B., Ware, J., & Shapiro, E. (2020). Assessing the threat of incel violence. *Studies in Conflict & Terrorism*, *43*(7), 565–587. https://doi.org/10.1080/1057610X.2020.1751459

Høiland, T. (2019). *Incels and the stories they tell: A narrative analysis of Incels' shared stories on Reddit* [Master's thesis]. University of Oslo

Jaki, S., Smedt, T. D., Gwózdz, M., Panchal, R., Rossa, A., & De Pauw, G. (2019). Online hatred of women in the incels.me forum: Linguistic analysis and automatic detection. *Journal of Language Aggression and Conflict*, *7*(2), 240–268. https://doi.org/10.1075/jlac.00026.jak

Jonason, P. K., & Webster, G. D. (2010). The dirty dozen: A concise measure of the dark triad. *Psychological Assessment*, *22*(2), 420–432. https://doi.org/10.1037/a0019265

Kesvani, H. (2019). *"Currycels" and the unsurprising racism of the incel community*. MEL Magazine. https://melmagazine.com/en-us/story/currycels-and-the-unsurprising-racism-of-the-incel-community

Kim, E. (2022). *The tall tale of the White incel king of Thailand*. MEL Magazine. https://melmagazine.com/en-us/story/itsover-incel-thailand-seamaxxing

Klee, M. (2022). *The depressing rise of "Wordcels" and "numbercels."* MEL Magazine. https://melmagazine.com/en-us/story/wordcels-numbercels-definition

Kwang, T., & Swann, W. B., Jr. (2010). Do people embrace praise even when they feel unworthy? A review of critical tests of self-enhancement versus self-verification. *Personality and Social Psychology Review*, *14*(3), 263–280. https://doi.org/10.1177/1088868310365876

Lee, S. A. (2020). Coronavirus Anxiety Scale: A brief mental health screener for COVID-19 related anxiety. *Death Studies*, *44*(7), 393–401. https://doi.org/10.1080/07481187.2020.1748481

MacKinnon, D. P., & Dwyer, J. H. (1993). Estimating mediated effects in prevention studies. *Evaluation Review*, *17*(2), 144–158. https://doi.org/10.1177/0193841X9301700202

MacKinnon, D. P., & Pirlott, A. G. (2015). Statistical approaches for enhancing causal interpretation of the M to Y relation in mediation analysis. *Personality and Social Psychology Review*, *19*(1), 30–43. https://doi.org/10.1177/1088868314542878

Martel, F. A., Buhrmester, M., Gómez, A., Vázquez, A., & Swann, W. B., Jr. (2021). Why true believers make the ultimate sacrifice: Sacred values, moral convictions, or identity fusion? *Frontiers in Psychology*, *12*, Article 779120.

McCauley, C., & Moskalenko, S. (2017). Understanding political radicalization: The two-pyramids model. *American Psychologist*, *72*(3), 205–216. https://doi.org/10.1037/amp0000062

McCredie, M. N., & Morey, L. C. (2019). Who are the Turkers? A characterization of MTurk workers using the personality assessment inventory. *Assessment*, *26*(5), 759–766. https://doi.org/10.1177/1073191118760709

Moonshot. (2020). *Incels: A guide to symbols and terminology*. https://moonshotteam.com/resource/incels-a-guide-to-symbols-and-terminology/

Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model.

*Psychological Inquiry*, *12*(4), 177–196. https://doi.org/10.1207/S15327965PLI1204_1

Moskalenko, S., Burton, B. S., Fernández-Garayzábal González, J., & Bloom, M. M. (2022). Secondhand conspiracy theories: The social, emotional and political tolls on loved ones of Qanon followers. *Democracy and Security*. Advance online publication. https://doi.org/10.1080/17419166.2022.2111305

Moskalenko, S., González, J. F.-G., Kates, N., & Morton, J. (2022). Incel ideology, radicalization and mental health: A survey study. *The Journal of Intelligence, Conflict, and Warfare*, *4*(3), 1–29. https://doi.org/10.21810/jicw.v4i3.3817

Nagourney, A., Cieply, M., Feuer, A., & Lovett, I. (2014, June 1). Before brief, deadly spree, trouble since age 8. *The New York Times*. https://www.nytimes.com/2014/06/02/us/elliot-rodger-killings-in-california-followed-years-of-withdrawal.html

Neff, L. A., & Karney, B. R. (2005). To know you is to love you: The implications of global adoration and specific accuracy for marital relationships. *Journal of Personality and Social Psychology*, *88*(3), 480–497. https://doi.org/10.1037/0022-3514.88.3.480

O'Laughlin, K. D., Martin, M. J., & Ferrer, E. (2018). Cross-sectional analysis of longitudinal mediation processes. *Multivariate Behavioral Research*, *53*(3), 375–402. https://doi.org/10.1080/00273171.2018.1454822

Pelham, B. W., & Swann, W. B. (1989). From self-conceptions to self-worth: On the sources and structure of global self-esteem. *Journal of Personality and Social Psychology*, *57*(4), 672–680. https://doi.org/10.1037/0022-3514.57.4.672

Preacher, K. J., & Kelley, K. (2011). Effect size measures for mediation models: Quantitative strategies for communicating indirect effects. *Psychological Methods*, *16*(2), 93–115. https://doi.org/10.1037/a0022658

Ribeiro, M. H., Blackburn, J., Bradlyn, B., De Cristofaro, E., Stringhini, G., Long, S., Greenberg, S., & Zannettou, S. (2020). From pick-up artists to incels: A data-driven sketch of the manosphere. *ArXiv:2001.07600 [Cs]*. http://arxiv.org/abs/2001.07600

Rousis, G. J. (2022). *Theories of extreme pro-group behavior: A meta-analysis* [Manuscript submitted for publication].

Schoemann, A. M., Boulton, A. J., & Short, S. D. (2017). Determining power and sample size for simple and complex mediation models. *Social Psychological and Personality Science*, *8*(4), 379–386. https://doi.org/10.1177/1948550617715068

Speckhard, A., & Ellenberg, M. (2022). Self-reported psychiatric disorder and perceived psychological symptom rates among involuntary celibates (incels) and their perceptions of mental health treatment. *Behavioral Sciences of Terrorism and Political Aggression*. Advance online publication. https://doi.org/10.1080/19434472.2022.2029933

Swann, W. B., Jr. (1983). Self-verification: Bringing social reality into harmony with the self. In J. Suls & A. G. Greenwald (Eds.), *Social psychological perspectives on the self* (2nd ed., pp. 33–66). Lawrence Erlbaum.

Swann, W. B., Jr. (2012). Self-verification theory. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (pp. 23–42). SAGE. https://doi.org/10.4135/9781446249222.n27

Swann, W. B., Jr., & Buhrmester, M. D. (2015). Identity fusion. *Current Directions in Psychological Science*, *24*, 52–57. https://doi.org/10.1177/0963721414551363

Swann, W. B., Jr., Buhrmester, M. D., Gómez, A., Jetten, J., Bastian, B., Vázquez, A., Ariyanto, A., Besta, T., Christ, O., Cui, L., Finchilescu, G., González, R., Goto, N., Hornsey, M., Sharma, S., Susianto, H., & Zhang, A. (2014). What makes a group worth dying for? Identity fusion fosters perception of familial ties, promoting self-sacrifice. *Journal of Personality and Social Psychology*, *106*(6), 912–926. https://doi.org/10.1037/a0036089

Swann, W. B., Jr., Gómez, Á., Seyle, D. C., Morales, J. F., & Huici, C. (2009). Identity fusion: The interplay of personal and social identities in extreme group behavior. *Journal of Personality and Social Psychology*, *96*(5), 995–1011. https://doi.org/10.1037/a0013668

Swann, W. B., Hixon, J. G., & De La Ronde, C. (1992). Embracing the bitter "truth": Negative self-concepts and marital commitment. *Psychological Science*, *3*(2), 118–121. https://doi.org/10.1111/j.1467-9280.1992.tb00010.x

Swann, W. B., Hixon, J. G., Stein-Seroussi, A., & Gilbert, D. T. (1990). The fleeting gleam of praise: Cognitive processes underlying behavioral reactions to self-relevant feedback. *Journal of Personality and Social Psychology*, *59*(1), 17–26. https://doi.org/10.1037/0022-3514.59.1.17

Swann, W. B., Jr., Jetten, J., Gómez, Á., Whitehouse, H., & Bastian, B. (2012). When group membership gets personal: A theory of identity fusion. *Psychological Review*, *119*(3), 441–456. https://doi.org/10.1037/a0028589

Swann, W. B., Jr., Kwan, V. S. Y., Polzer, J. T., & Milton, L. P. (2003). Fostering group identification and creativity in diverse groups: The role of individuation and self-verification. *Personality and Social Psychology Bulletin*, *29*(11), 1396–1406. https://doi.org/10.1177/0146167203256868

Swann, W. B., Jr., Milton, L. P., & Polzer, J. T. (2000). Should we create a niche or fall in line? Identity negotiation and small group effectiveness. *Journal of Personality and Social Psychology*, *79*(2), 238–250. https://doi.org/10.1037/0022-3514.79.2.238

Swann, W. B., Jr., Pelham, B. W., & Krull, D. S. (1989). Agreeable fancy or disagreeable truth? Reconciling self-enhancement and self-verification. *Journal of Personality and Social Psychology*, *57*(5), 782–791.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of inter-group conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of inter-group relations* (pp. 33–47). Brooks/Cole.

Tamhane, A. C. (1979). A comparison of procedures for multiple comparisons of means with unequal variances. *Journal of the American Statistical Association*, *74*(366a), 471–480. https://doi.org/10.1080/01621459.1979.10482541

Wen, Z., & Fan, X. (2015). Monotonicity of effect sizes: Questioning kappa-squared as mediation effect size measure. *Psychological Methods*, *20*(2), 193–203. https://doi.org/10.1037/met0000029

Whitehouse, H., McQuinn, B., Buhrmester, M., & Swann, W. B. (2014). Brothers in arms: Libyan revolutionaries bond like family. *Proceedings of the National Academy of Sciences*, *111*(50), 17783–17785. https://doi.org/10.1073/pnas.1416284111

Wiesenfeld, B. M., Swann, W. B., Jr., Brockner, J., & Bartel, C. (2007). Is more fairness always preferred? Self-esteem moderates reactions to procedural justice. *Academy of Management Journal*, *50*, 1235–1253.

Zell, E., Strickhouser, J. E., Sedikides, C., & Alicke, M. D. (2020). The better-than-average effect in comparative self-evaluation: A comprehensive review and meta-analysis. *Psychological Bulletin*, *146*(2), 118–149. https://doi.org/10.1037/bul0000218