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REAL MEN DON'T SHARE (ONLINE): PERCEIVED NEEDINESS AND THE FREQUENT-POSTING FEMININITY STEREOTYPE

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Manuscripts

1
2
3
4
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14
15
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REAL MEN DON'T SHARE (ONLINE): PERCEIVED NEEDINESS AND THE

FREQUENT-POSTING FEMININITY STEREOTYPE

Purpose: Research emphasizes the motivations underlying and potential harmful consequences of social media use, but there is little understanding of stigmas faced by individual social media users, particularly as they pertain to gender. In the current research, we examine a unique stereotype related to men's social media use.

Design/methodology/approach: Four experiments examine judgments of men based on how often they post on social media (frequently vs. infrequently).

Findings: We find that posting frequently (vs. infrequently) affects the perceived gender of men, but not women. This frequent-posting femininity stereotype is explained by perceived neediness and holds regardless of whether posts are about others (vs. the self) or whether posts are shared by influencers (vs. ordinary users).

Research limitations/implications: Future research should examine other stereotypes of social media users—including those pertaining to gender—and ways to mitigate such negative attributions. Researchers should examine how the frequent-posting femininity stereotype and other social-media use stereotypes affect social media consumption and consumer wellbeing.

Practical implications: Managers should adjust consumer engagement strategies and restructure platforms to address the unique stigmas facing different consumer groups.

Originality/value: Providing insights into the dark side of social media, we investigate a unique domain—stereotypes about individual social media users. Our findings uncover an emasculating stigma against men who post often on social media, which may discourage men from online participation.

Keywords: Social media, post frequency, masculinity, gender, stereotype, dark side, digital consumption

Article classification: Research paper – Research note

INTRODUCTION

What do consumers signal about themselves when they post on social media? Across social media platforms and online networks, consumers are driven to share the very best of themselves—an idealized self-performance designed to showcase one's success, power, beauty, worldliness, and humor, among other characteristics (Constantz, 2022). From adventurous travels abroad to poolside glamor shots, social media posting behavior taps into the fundamental core of who consumers are and how they wish to be seen (Rogova and Matta, 2022). However, it is possible—and even likely—for these intended signals to go awry and make way for less desirable attributions (e.g., narcissism; Brailovskaia *et al.*, 2019).

While prior accounts suggest diverse benefits and drawbacks of social media usage (Hugh *et al.*, 2022; Hughes *et al.*, 2019; Whiting and Williams, 2013), including insights pertaining to the unique position of social media influencers (Brooks *et al.*, 2021; Drenten *et al.*, 2020), relatively little is known about how *ordinary* consumers of digital platforms are evaluated by others. In response to calls for research on the dark side of social media (Baccarella *et al.*, 2018) and gendered consumption prejudice (Rogova and Matta, 2022; Spielmann *et al.*, 2021; Warren and Campbell, 2020; Zayer *et al.*, 2020b), we uncover a novel association made about men[1] who post frequently online.

Namely, we theorize and demonstrate evidence of a frequent-posting femininity stereotype: All else being equal, men who post more often on social media are considered more feminine than those who seldom post. Because online posting is associated with attention-seeking

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[1] Note that in the current paper, we use gender-signifying terms including man, male, woman, and female to denote the sociocultural elements of gender performance (i.e., which may or may not be related to biological sex).

(Panek *et al.*, 2018), we posit that the frequent-posting femininity stereotype is explained by the poster's perceived neediness (i.e., a desire for external validation), a trope that falls within the communal orientation of feminine gender performance (Eagly *et al.*, 2020). Drawing on the theory of precarious manhood—the idea that idealized masculinity is difficult to attain and easy to lose (Vandello and Bosson, 2013)—we suggest that posting frequently online comes with a critical degree of embedded stigma and can change gender perceptions of men but not women.

We demonstrate evidence of this framework across four studies, including two pre-registered conceptual replications. In addition, we show that the frequent-posting femininity stereotype is robust when controlling for a number of confounds related to both the poster (e.g., posting platform of choice) and the person judging him (e.g., the judger's age). Finally, we demonstrate that this stereotype remains intact even when the focal user posts about others (vs. the self) or is a social media influencer (vs. ordinary user), providing further empirical support for the prevalence of this core effect.

In turn, the current research makes significant contributions to our understanding of social media and modern masculinity and, in doing so, answers calls for research on intersections between gendered consumption, gendered prosumption, and the institutions that shape gender ideals (Coleman *et al.*, 2021; Gurrieri *et al.*, 2022; Steinfield *et al.*, 2019; Zayer *et al.*, 2020a). Specifically, by focusing on perceptions of individual online users, our work reveals unique gender-based stereotypes and enriches the conversation around social media consumption (Kedzior *et al.*, 2016; Rabbanee *et al.*, 2020; Whiting and Williams, 2013). We further contribute to the literature on gender-based consumption practices (Hein *et al.*, 2016; Rogova and Matta, 2022; Zayer *et al.*, 2020b) and stigmas (Coleman and Sredl, 2022; Drenten *et al.*, 2022) by revealing a pervasive stereotype that affects perceptions of men who post on social media—with substantive implications for social media use. Our findings suggest a need for broader research on

judgments made about social media users and ways that consumers and institutional actors may

address any such stigmas.

CONCEPTUAL DEVELOPMENT

Gender, Consumption, and Stigma

Gender research emphasizes the role of society in shaping prescriptive gender beliefs and

ideals. For instance, seminal work by Butler (1993) argues that societal norms create standards of

appropriateness for how men and women are expected to think, feel, and behave. Such norms

limit gender expression by encouraging certain behaviors and suppressing others (Borgerson,

2005). Markets reinforce these standards and provide materials that consumers use to construct

and perform their gender identities (Butler, 1993, 95; Zayer *et al.*, 2012). These prescribed gender

roles are often internalized and tend to result in a spontaneous drawing of social comparisons. For

example, both male and female consumers evaluate themselves negatively when exposed to ads

featuring idealized versions of masculinity and femininity, respectively (Gulas and McKeage,

2000; Otnes and Tuncay Zayer, 2012; Richins, 1991). In addition, consumers who diverge from

prescribed gender roles can face harsh stigma from others. Indeed, recent research has

highlighted the negative social judgments faced by female gamers (Drenten *et al.*, 2022), female

athletes (Thompson and Üstüner, 2015), and stay-at-home dads (Coskuner-Balli and Thompson,

2013; Moisio *et al.*, 2013), all of whom partake in activities and occupations seen as in

misalignment with expected gender performance.

Yet, the impact of gender stereotypes and discrimination on men is often overlooked (Zayer and Coleman, 2015). Nevertheless, existent research demonstrates that men internalize gendered consumption expectations (Otnes and Tuncay Zayer, 2012), and these norms shape the products they buy (Brough *et al.*, 2016; Spielmann *et al.*, 2021) and influence how they evaluate the gender appropriateness of seemingly non-gendered behaviors (e.g., sleep; Warren and Campbell, 2020). A common theme suggested by this work is that men are expected to perform masculinity—and are often rewarded for doing so—despite the fact that many traditionally masculine-coded behaviors (e.g., ruggedness, stoicism, independence, aggression) pose harm to the self and others (Hill *et al.*, 2020; Luna-Cortes and Cuellar, 2022). Still, the imposed expectation for men to avoid feminine behaviors is pervasive, as doing so carries substantial threat of stigma and out-group ostracization (Brough *et al.*, 2016; Courtenay, 2000).

We examine how these complex social dynamics impact a novel domain: social media. Interestingly, research on digital platforms has only sparsely examined how ordinary social media users are seen by others (Valsesia and Diehl, 2021)—and has not at all considered evaluations of male users, who may be stigmatized differently than women (Vandello and Bosson, 2013). In the sections that follow, we outline a conceptual framework proposing that consumers who frequently (vs. rarely) post on social media are evaluated as needier, and this judgment affects subsequent gender perceptions of men but not women (i.e., post frequency has a uniquely feminizing effect on judgments of men).

Social Media Posting and Perceived Neediness

Posting is a primary means by which consumers actively engage on various online platforms (Kedzior *et al.*, 2016; Whiting and Williams, 2013). Social media users share information across these apps to receive a number of unique gratifications, including feelings of authenticity (Kedzior *et al.*, 2016), social connectedness (Rabbanee *et al.*, 2020), social influence (Brooks *et al.*, 2021; Cheng *et al.*, 2023), and knowledge transfer (Whiting and Williams, 2013).

However, extant research has also described a variety of problematic associations related to posting. For instance, scholars have identified that frequent online sharing relates positively to narcissism (Brailovskaia *et al.*, 2019) and negatively to psychological well-being (Ponnusamy *et al.*, 2020). Further, and more critical to the current research, consumers tend to ascribe unfavorable motives to those who post regularly on social media, often associating such behavior with self-serving, ego-driven attempts to receive positive validation and affirmation (Brailovskaia *et al.*, 2019; Sorokowski *et al.*, 2015). For instance, the term "sadfishing" pejoratively describes the act of sharing emotional content to attract attention (Hand, 2019). Further, a wealth of literature has described the selfie-posting phenomenon as an aestheticized practice rooted both in vanity (Halpern *et al.*, 2016) and a desire to garner praise (Drenten *et al.*, 2020).

We, therefore, suggest that implicit in observations of social media users' frequent posting behavior is a fundamental attribution of neediness—consumers judge frequent (vs. infrequent) posters as in need of more approval, validation, and attention. In the following section, we detail the ways in which this belief may trigger perceptions of femininity.

Neediness as a Stigmatized Trope of Feminine Gender Performance

Though there is a great deal of variation in expressions of masculinity and femininity, the former is generally associated with agentic characteristics (e.g., independence) and the latter with communal characteristics (e.g., interdependence; Eagly *et al.*, 2020; Wood and Eagly, 2002). Critical to the current research, posting on social media is often described as a *communally* oriented behavior motivated chiefly by a drive to share with others (Belk, 2013; John, 2013). Thus, we suggest posting may be perceived as reflecting characteristics associated with conventional social constructions of femininity, such as interdependence and neediness. Notably, interdependence carries both positive and negative associations (e.g., cooperation and overreliance), while neediness carries generally negative associations (Eagly *et al.*, 2020; Vandello and Bosson, 2013). As referenced prior, social media posting is often motivated by a desire for attention and praise (Brooks *et al.*, 2021; Drenten *et al.*, 2020). This suggests that frequent posters should be evaluated as more in need of social approval (i.e., needier) than those who seldom post.

In turn, we reason that if frequent social media posting behavior signals a sense of neediness—and this is coded implicitly as feminine—such a gender-related judgment should carry over to the man posting. Thus, we hypothesize the following:

H₁: Men who post frequently (vs. infrequently) on social media will be evaluated as more feminine.

H₂: Men who post frequently (vs. infrequently) on social media will be evaluated as needier, and neediness will mediate the effect of post frequency on femininity.

Precarious Manhood: Femininity Is Stigmatized for Men

We further predict that the effect of post frequency on perceptions of neediness and gender performance will relate specifically to men and not women. Why? The theory of precarious manhood suggests that masculinity is a restrictive and fraught identity that requires perpetual social proof and validation (Vandello and Bosson, 2013; Vandello *et al.*, 2008). Indeed, the precarious nature of manhood has been demonstrated to affect consumption decisions. For instance, men have been shown to avoid feminine brands, while women tend to embrace brands regardless of existing gender associations (Spielmann *et al.*, 2021).

The fragility of manhood is also exemplified in everyday linguistic choices. For instance, Vandello and Bosson (2013) note that, "We ask whether men have become 'too soft,' we implore them to 'man up' in the face of difficulties, and we question whether someone is 'man enough' for the job." Conversely, phrases challenging women's status as women such as "woman up" or "woman enough" are less common (Vandello and Bosson, 2013). As a result, it has been suggested that there are "many ways to be a girl but only one way to be a boy" (Miller, 2018). Consequently, men tend to be disproportionately ostracized and emasculated for deviating from prescriptive gender norms (Vandello and Bosson, 2013).

In turn, we suggest that social media post frequency is not only feminized but more broadly represents a stigmatized behavior among men. This is because the concept of neediness is often weaponized to demean others seen as shameful and weak (Thomas *et al.*, 2020). Such attributions may further reinforce a cycle in which a feminized trope—neediness—is ascribed a degree of widespread social denigration. Messages continue to proliferate in modern consumer life that men should be stoic and self-sufficient (Åkestam *et al.*, 2021; Östberg, 2019; Zayer *et al.*, 2020b), yet frequent social media posting signals the opposite. Thus, we contend that frequent

posting by men is denounced as an indicator of powerlessness and fragility—of femininity (Kierski and Blazina, 2010; Vandello and Bosson, 2013; Vandello *et al.*, 2008).

Given the narrow, precarious nature of masculinity (vs. femininity), we suggest that the neediness ascribed to those who post frequently on social media will affect gender perceptions of men but not women. Stated differently, post frequency will be evaluated as similarly needy regardless of the poster's gender but will only affect subsequent ratings of femininity for men.

H₃: Poster gender will moderate the effect of neediness on femininity, such that the perceived neediness associated with frequent social media posting will increase subsequent femininity ratings of men but not women.

Potential Stigma-Breakers

What factors might mitigate the frequent-posting femininity stereotype? We investigate two possibilities—the focus of the post (self vs. others) and the status of the poster (ordinary user vs. influencer)—both of which might reasonably dampen perceptions of neediness.

Regarding post focus, research suggests that the association between post frequency and narcissism strengthens among those who share more online about themselves than about others (Panek *et al.*, 2018). Further, posts about the self (e.g., "selfies") can appear ego-driven and, thus, magnify a signaled need for personal validation (Lim, 2016). By contrast, we suggest that men who post frequently about others will appear *less* needy, because their posts are not explicitly about themselves.

H₄: Post focus will moderate the effect of post frequency on neediness, such that

frequent-posting men who post about others (vs. themselves) will be evaluated as

less needy and, thus, less feminine.

Next, we interrogate the relative status of the poster. When so-called "ordinary" users

share information on social media, their potential rewards are typically limited to attention from

and connection with those in their existing networks (McCain and Campbell, 2018; O'Sullivan

and Richardson, 2020). In contrast, social media "influencers" are often incentivized to post for

prospects of financial gain (Hugh *et al.*, 2022) and tend not to engage as much with their

followers (Lanz *et al.*, 2019). More broadly, influencers already receive a great deal of attention

and, therefore, have less need for more. Thus, we posit that among frequent-posting men,

ordinary social media users will be evaluated as needier and more feminine than influencers.

H₅: Poster status will moderate the effect of post frequency on neediness, such that

frequent-posting men described as influencers (vs. ordinary) will be evaluated as

less needy and, thus, less feminine.

OVERVIEW OF EMPIRICAL FRAMEWORK AND STUDIES

Four studies demonstrate that men described as posting frequently (vs. infrequently) on

social media are evaluated as more feminine (studies 1–3B). We provide evidence of mediation

by perceived neediness (studies 2–3B), as well as indicate via moderation that such neediness

affects subsequent gender perceptions of men but not women (study 2). In addition, our results

hold when controlling for inferred characteristics of the focal poster, such as age and posting

platform, and a variety of participant-related confounds, such as gender and social media use.

Notably, we predicted that the focus of the social media user's posts (self- vs. other-

focused; H_4) and the status of the poster (ordinary vs. influencer; H_5) would serve as stigma-

breakers, mitigating the perceptions of neediness and femininity associated with men's frequent

social media posting behavior. However, rather than observe these hypothesized moderation

effects, studies 3A and 3B show that our overall mediation process remained unchanged

regardless of these factors. We believe this speaks to the pervasiveness of the frequent-posting

femininity stereotype (i.e., it is difficult to break) and consider implications for future research in

the general discussion.

--INSERT FIGURE 1 ABOUT HERE--

STUDY 1

Study 1 establishes a main effect of post frequency on the perceived gender of men who

post on social media. More specifically, study 1 demonstrates that men are emasculated when

described as frequently (vs. infrequently) posting on social media. We assess this stereotype by

presenting participants with a description of a hypothetical man who posts often or rarely across

various platforms, then gauging subsequent inferences about the poster on the basis of this

information. We probe the robustness of our effect in a number of ways. First, we assess the

extent to which perceptions of femininity are driven by other inferences about the focal poster

(i.e., his age, level of education, and wealth). Second, we use participants' personal demographic

characteristics to control for the role of such traits in judgments and perceptions of gender

performance. Finally, we measure participants' personal social media behavior to account for the possibility that consumers simply evaluate others' posting activity in relation to their own.

Method

One hundred sixty-four participants (47.6% women, 3.0% ND[2]; M_{Age} = 39.1) completed this study on Prolific[3]. The study had a two-cell design, with post frequency (frequently vs. infrequently) manipulated as a between-subjects factor.

In the frequently-posts (infrequently-posts) condition, participants were asked to "evaluate a normal, average, ordinary man who frequently (infrequently) posts on social media" (see figure 2). To control for any motivational inferences made about the focal user's posting behavior, we noted that the man shares on his personal accounts for fun (i.e., *not* for work-related reasons). Further, we highlighted the everyday nature of the user by noting that he follows more accounts than follow him, and that all his followers are those he has met in real life. Following the "Directed Describing" method (Warren and Campbell, 2020), participants provided the focal poster a name, and this was piped into subsequent questions describing the focal poster. As a manipulation check, all studies asked participants to rate how often the focal user posts on social media[4]. The frequently (vs. infrequently) posting character was always rated as posting more

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[2] ND = Not Disclosed. Participant's self-identified gender is "other/prefer not to say."
[3] In this study, we initially recruited 200 participants. However, a coding error in the survey flow resulted in 36 participants not completing the perceived gender measures. We eliminated those participants from analysis. In addition, we retained 32 participants who completed the perceived gender measures but did not complete control measures indicating the poster's age, education, and wealth.
[4] Unless otherwise noted, all items were measured using seven-point scales.

often, ps < .001 (see the web appendix for additional details on manipulation checks, measures, and supplementary analyses for all studies).

Next, participants rated gender perceptions (i.e., femininity) of the focal poster. We operationalized this as the mean of two items measuring the extent to which the poster was perceived as "feminine" and "masculine," with the latter reverse-coded, $r = .59$, $p < .001$.

Finally, we collected control measures. Participants estimated the poster's age (open-ended) as well as his education level and wealth. They then indicated their own social media use (scrolling and posting), then provided their gender, age, and political ideology.

--INSERT FIGURE 2 ABOUT HERE--

Results

In support of H_1, participants rated the frequent-posting man as significantly more feminine ($M_{Freq} = 3.27$, $SD_{Freq} = 1.11$) than the infrequent-posting man ($M_{Infreq} = 2.89$, $SD_{Infreq} = 0.95$), $t(162) = 2.34$, $p = .02$. Importantly, this result remained robust to the inclusion of various covariates, including inferences of the focal poster's age, education, and wealth, as well as demographic and lifestyle characteristics of the participant (i.e., age, gender, political beliefs, and social media habits), $F(1, 131) = 6.13$, $p = .015$. The inclusion of these covariates did not qualitatively change the interpretation of results for any studies.

Discussion

Study 1 revealed initial evidence of a frequent-posting femininity stereotype (H_1). This

effect appears robust to a range of plausible confounds; men described as posting frequently (vs.

infrequently) were evaluated as more feminine even after controlling for the poster's inferred age,

education, and wealth, as well as the participant's own age, gender, political beliefs, and social

media use. In the following study, we examine the moderating role of poster gender and uncover

process evidence for neediness as the mechanism explaining the positive relationship between

post frequency and perceived femininity.

STUDY 2

Study 2 had two goals. First, we sought to examine neediness as the mechanism

explaining why frequent posters are evaluated as more feminine (H_2). Second, we assessed the

moderating role of poster gender (H_3). Though we predict that frequent social media posting

activity will be evaluated as similarly needy across genders, we contend that such neediness will

only affect subsequent gender perceptions of male (vs. female) posters.

Method

Prolific participants ($N = 400$, 50.5% women, 0.5% ND, $M_{Age} = 36.2$) completed a 2 (post

frequency: frequently vs. infrequently) × 2 (poster gender: man vs. woman) between-subjects

experiment. Study 2 used the same post frequency manipulation as in study 1 but additionally

manipulated the gender of the focal poster as either a man or woman (see figure 2). Participants

rated the poster's femininity using the same measures as in study 1, $r = .822$, $p < .001$. Next,

participants rated the neediness of the focal poster, which we operationalized as the mean of two items asking participants how "needy" and "independent" (reverse-coded) they considered the poster, $r = .488$, $p < .001$. Finally, similar to study 1, participants answered additional questions about the focal poster and their personal demographics.

Results

We used PROCESS model 14 (Hayes, 2018) to test the hypothesized pattern of moderated mediation. We entered post frequency as the independent variable, neediness the mediator, poster gender the b path moderator, and femininity the dependent variable. As expected, the frequent-posting social media user was evaluated as significantly needier than the infrequent-posting user regardless of poster gender, $b = 1.06$, $SE = .11$, $t(397) = 9.79$, $p < .001$, [0.85, 1.27].

Further, as hypothesized, the effect of neediness on subsequent perceptions of femininity depended on the poster's gender. Results revealed a significant index of moderated mediation, $b = .30$, [.10, .51], such that the effect of post frequency on femininity was mediated by perceived neediness—but only when the social media user was a man. Probing this finding, and in support of H_2 and H_3, there was a significant conditional indirect effect of neediness in the man poster condition, $b = 0.17$, $SE = 0.07$, [0.03, 0.32] but not in the woman poster condition, $b = -0.12$, $SE = .08$, [-0.29, 0.02]. See figure 3 for process results and figure 4 for conditional means.

—INSERT FIGURE 3 ABOUT HERE—

—INSERT FIGURE 4 ABOUT HERE—

Discussion

Study 2 reveals that the effect of post frequency on gender perceptions is mediated by

neediness and moderated by poster gender. While both men and women posters were considered

needy, these ratings only affected subsequent gender perceptions when the poster was a man.

Altogether, the evidence gathered thus far suggests a robust stereotype motivated by the

precarious nature of masculinity. But will these beliefs always hold? Together, pre-registered

studies 3A and 3B were conducted to provide further confirmation of our primary hypothesis

(Simmons *et al.*, 2021) and examine two plausible ways to mitigate the frequent-posting

femininity stereotype.

STUDIES 3A AND 3B

Studies 3A (see pre-registration; also in web appendix) and 3B (see pre-registration)

assess two potential "stigma-breakers"—factors that serve to dampen perceptions of femininity

associated with frequent social media posting behavior. Respectively, the studies examine the

possible role of post focus (self vs. other) and poster status (influencer vs. ordinary) as

moderators of the effect of post frequency on perceived neediness. Studies 3A and 3B also serve

as replications for our basic mediation framework (i.e., post frequency → neediness →

femininity). Finally, studies 3A and 3B examine participants in the United Kingdom as compared

to the American samples in studies 1 and 2. This extends the generalizability of our findings to a

small degree, as there are distinct masculinity ideals in these two cultures (Horlacher and Floyd, 2017; Kilkey *et al.*, 2013).

Study 3A: Method

Prolific participants completed a 2 (post frequency: frequently vs. infrequently) × 2 (post focus: self vs. other) between-subjects design ($N = 396$, 49.5% women, .5% ND, $M_{Age} = 39.7$). The post frequency manipulation was identical to studies 1 and 2. Post focus was manipulated by describing the focal user's posts as either about "himself and the things he is doing" (self-focused) or "other people, events, and places" (other-focused; see figure 5).

Participants rated the neediness of the user with the same measure as study 2. To confirm the reliability of the neediness measure, we included three additional items ($\alpha = .87$) adapted from Rude and Burnham (1995), which were highly reliable with our two-item measure ($\alpha = .88$). The results of studies 3A and 3B were qualitatively unchanged when using either operationalization; thus, for clarity of reporting, we use the same two-item neediness measure from study 2 for all subsequent analyses. In addition to the control measures from previous studies, participants indicated which online platform they believe the focal social media user most often uses (e.g., Facebook, Twitter, Instagram, TikTok, etc.). Including favored platform as a covariate did not alter the results in either study.

--INSERT FIGURE 5 ABOUT HERE—

Study 3A: Results

A 2 (post frequency) × 2 (post focus) ANOVA revealed significant effects of post frequency on femininity and neediness ($ps < .001$). However, neither the main effect of post focus nor the post frequency × post focus interactions on femininity or neediness were significant ($ps > .09$). More importantly, the predicted simple effects within the frequent-posting condition on femininity and neediness were statistically insignificant ($ps > .43$). As a result, we did not find evidence that posting about others (vs. the self) mitigates the effect of post frequency on femininity or neediness (H_4). In turn, we collapsed across post focus conditions to more explicitly consider the effect of post frequency.

In support of H_1, the frequent-posting man was evaluated as more feminine ($M_{Freq} = 3.58$, $SD_{Freq} = 1.17$) than the infrequent-posting man ($M_{Infreq} = 3.07$, $SD_{Freq} = 1.05$), $t(394) = 5.13$, $p < .001$. The frequent-posting man was also evaluated as needier ($M_{Freq} = 4.14$, $SD_{Infreq} = 1.29$) than the infrequent-posting man ($M_{Infreq} = 2.32$, $SD_{Infreq} = .91$), $t(394) = 16.23$, $p < .001$. Mediation analysis using PROCESS model 4 revealed that neediness fully mediated the effect of post frequency on perceived femininity, $b = 0.40$, [0.22, 0.59], thus, providing further support for H_2.

Study 3B: Method

Study 3B was identical to study 3A with one exception: It manipulated poster status (ordinary vs. influencer) rather than post focus. Specifically, the poster was described as either an "ordinary man" or a "social media influencer" (see figure 5). Four hundred and two Prolific participants completed this study (49.8% women, .5% ND, $M_{Age} = 38.4$).

Study 3B: Results

A 2 (post frequency) × 2 (poster status) ANOVA revealed significant main effects of post frequency on femininity and neediness (*ps* < .001) but statistically insignificant higher-order interactions (*ps* > .12). The predicted simple effects within the frequent-posting condition on femininity and neediness were also insignificant (*ps* > .66). As a result, we did not find evidence that being an influencer (vs. ordinary user) mitigates the effect of post frequency on femininity or neediness (H_5). In turn, we collapsed across poster status conditions to more explicitly consider the effect of post frequency.

In support of H_1, the frequent-posting man was evaluated as more feminine (M_{Freq} = 3.55, SD_{Freq} = 1.08) than the infrequent-posting man (M_{Infreq} = 3.28, SD_{Infreq} = .98), $t(400)$ = 2.64, p = .009. The frequent-posting man was also evaluated as needier (M_{Freq} = 4.22, SD_{Freq} = 1.18) than the infrequent-posting man (M_{Infreq} = 2.37, SD_{Freq} = .97), $t(400)$ = 17.16, p < .001. Mediation analysis using PROCESS model 4 revealed that neediness fully mediated the effect of post frequency on perceived femininity, b = 0.44, [0.26, 0.65], thus, providing further support of H_2.

Studies 3A and 3B: Discussion

In contradiction to H_4 and H_5, studies 3A and 3B found no evidence to suggest that post focus or poster status mitigates the perceived neediness and femininity of frequent-posting men. Rather, these two pre-registered studies demonstrated that men who post frequently are evaluated as needier and more feminine than men who post infrequently, regardless of whether they post

about themselves or others (study 3A)—or are influencers or ordinary social media users (study

3B). The subsequent discussion considers why the frequent-posting femininity stereotype may

persist despite these potential stigma-breakers.

GENERAL DISCUSSION

The current research reveals a novel stereotype about social media users, and

consequently suggests avenues for further research on gendered consumption practices and

judgments about online consumers. All else being equal, men described as frequent social media

posters are evaluated as more feminine than infrequent posters. This prejudicial attitude stems

from perceived neediness and impacts subsequent gender perceptions of men but not women.

Critically, this stereotype holds when controlling for several relevant confounds, including

characteristics ascribed to the focal poster as well as participants' personal social media use and

demographics.

Counter to our stigma-breaker moderation hypotheses (H_4 and H_5), the frequent-posting

femininity stereotype remained surprisingly unchanged when manipulating two theoretically

plausible stigma-breaking moderators—post focus (i.e., posting about others versus the self) and

poster status (i.e., posts from influencers versus ordinary users). We suggest it is possible that

other-focused posts did not mitigate the frequent-posting femininity stereotype because such

posts are seen as "virtue signals," resulting in posters being evaluated as in need of validation of

their moral character (Wallace *et al.*, 2020). Further, we unexpectedly found that influencers' (vs.

ordinary users') relative status exacerbated rather than offset perceptions of neediness. This

aligns with recent coverage that influencers may not be as admired as press accounts suggest

(Constantz, 2022). In sum, we submit that the frequent-posting femininity stereotype affects a broad swath of male users regardless of their status and about whom they post.

Theoretical Contributions

We contribute to research on social media consumption by putting focus on associations made about consumers' social media posting behavior. Past work has interrogated user motivations for posting (Rogova and Matta, 2022)—particularly among influencers (Brooks *et al.*, 2021; Drenten *et al.*, 2020)—as well as the benefits and consequences of social media use (Ponnusamy *et al.*, 2020; Whiting and Williams, 2013). For example, extant findings suggest that narcissists are more likely to engage in online posting behavior (McCain and Campbell, 2018), and influencers are more credible endorsers when they are seen as attractive and authentic (Hugh *et al.*, 2022; Rohde and Mau, 2021). We adopt a novel perspective by examining evaluations of ordinary social media users and, in doing so, reveal that men are stigmatized as more feminine when they post frequently (vs. infrequently) on social media.

By revealing a stereotype against men based on their social media activity, we contribute to research on gendered consumption (Hein *et al.*, 2016; Zayer *et al.*, 2020b), masculinity (Vandello and Bosson, 2013), and gendered stereotype threat (Drenten *et al.*, 2022; Luna-Cortes and Cuellar, 2022; Warren and Campbell, 2020). Past research suggests that narrow cultural conceptions of masculinity force men to choose between doing what is considered manly and what they may prefer (Vandello and Bosson, 2013). For example, the stigmas associated with gendered consumption stereotypes may lead men to avoid certain foods and brands (Luna-Cortes and Cuellar, 2022; Spielmann *et al.*, 2021), pollute (Brough *et al.*, 2016), and engage in

unhealthy behaviors (Warren and Campbell, 2020). We establish that gendered consumption stereotypes apply to social media as well, with particularly fraught implications for male users.

The frequent-posting femininity stereotype further contributes to a growing field of research examining the role of gender performance on digital consumption (Kondakciu *et al.*, 2022; Rogova and Matta, 2022). For instance, past work has suggested that social media is a highly sexualized environment for female influencers (Drenten *et al.*, 2020), that ordinary users attempt to use social media to "authentically" perform and present gender (Kondakciu *et al.*, 2022), and that men carve out exclusionary boundaries of dominance in certain online domains (e.g., gaming; Drenten *et al.*, 2022). We add to this conversation by revealing a pervasive stereotype about male consumers in more general social media environments.

Practical Implications and Directions for Future Research

The frequent-posting femininity stereotype suggests important implications for firms and leaves open many avenues for future research. First, we find that frequent-posting men and women are both evaluated as needy, though such attributions only affect subsequent gender perceptions of men. This suggests a need to further examine negative perceptions of social media users, to identify when social media users are positively evaluated, and to understand how specific groups of consumers may be uniquely affected by different stereotypes.

Relatedly, our research revealed a broad stereotype held against heteronormative conceptions of masculinity and, thus, did not examine more nuanced gender constructions. This suggests a need for additional work examining judgments of social media use both between and within various gender subcultures (e.g., by class, sexuality, etc.). Along these lines, future

research should also examine whether the frequent-posting femininity stereotype extends to cultures beyond the U.S. and the U.K. It is likely that the rigidity of a culture's gender norms (Brandt, 2011) or the value it places on interdependence (vs. independence; Markus and Kitayama, 1991) affects the strength of this prejudicial attitude.

Next, researchers should examine how user-directed judgments, such as the frequent-posting femininity stereotype, affect important downstream consequences. For instance, is it possible that this prejudice causes men to share less across online platforms? Secondary data indicates that women (vs. men) are more likely to use and spend time on social media (Neilsen, 2014; Pew Research Center, 2021). Scholars may investigate whether these passive-use trends translate to active engagement behaviors (e.g., posting), as well as the role of the frequent-posting femininity stereotype in this process.

Extending this, if stereotypes affect social media consumption behavior, how might these prejudicial attitudes subsequently affect consumer welfare or business outcomes? For example, if posting on social media provides social connectedness (Rabbanee *et al.*, 2020), might the frequent-posting femininity stereotype adversely affect men's mental health by making them feel self-conscious about joining certain online conversations? Understanding how organizations can use social media to improve men's user experiences could be particularly important in light of men's increasing struggles with social and economic isolation, as well as the psychological consequences of these feelings of loneliness (Farrell and Gray, 2018; Wu, 2022).

Relatedly, it is imperative for researchers, firms, and consumer advocates to identify and provide consumers with opportunities to engage with social media without being stigmatized. Despite two studies with theoretically plausible moderators (i.e., post focus and poster status), we were unable to mitigate the frequent-posting femininity stereotype. Alternative stigma-breakers may be found at the individual level. For example, men who post for work (i.e., an ostensibly

compulsory act) may appear less needy than those who post for personal reasons (i.e., an ostensibly volitional act). We further believe that valuable insights may come from in-depth examinations of the strategies employed by consumers who challenge these stereotypes. For instance, one recent stream of research has examined the way people use social media to push back against existing gender-related stigmas (Zayer *et al.*, 2019). For example, women have adopted social media to fight against the taboo nature of menstruation and reshape cultural narratives around labels such as feminism (Coleman and Sredl, 2022). How and when might men combat negative stereotypes about their online posting behavior?

In addition, the affordances of social media outlets themselves may provide opportunities to address stereotypes and improve user experiences, though different platforms will likely embrace these goals to varying degrees. While we controlled for potential platform effects in our empirical tests, we did not explicitly measure or tease out differences between individual social media platforms. Is it possible, for example, that the practice of posting is viewed as uniquely attention-seeking on public-facing platforms like Instagram versus private-facing platforms like Snapchat? Future research may investigate the extent to which different social media apps result in disparate user judgments via posting. Relatedly, platforms like BeReal build participatory communities in which users contribute through shared experiences, such as simultaneously posting when notified to do so. Might these conditions cause posters to come across as team players rather than needy self-advertisers? If so, firms and consumers may adopt strategies that diminish associations of neediness by routinizing posting behavior through ritualization (Sherry *et al.*, 2013) or restructuring the "space" of digital platforms to focus on empowering subcultural communities (Maciel and Wallendorf, 2021; Scaraboto and Fischer, 2013).

Overall, the current research represents a promising agenda for continued work on the multifaceted nature of prejudices affecting consumers engaged in today's complex social media

ecosystem. We suggest that it is important for researchers to further examine stigmas and

stereotypes about different social media user groups—and for firms to recognize these prejudicial

attitudes and adapt their platforms and engagement strategies accordingly.

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FIGURES AND TABLES

Figure 1.

Conceptual framework, hypotheses, and results
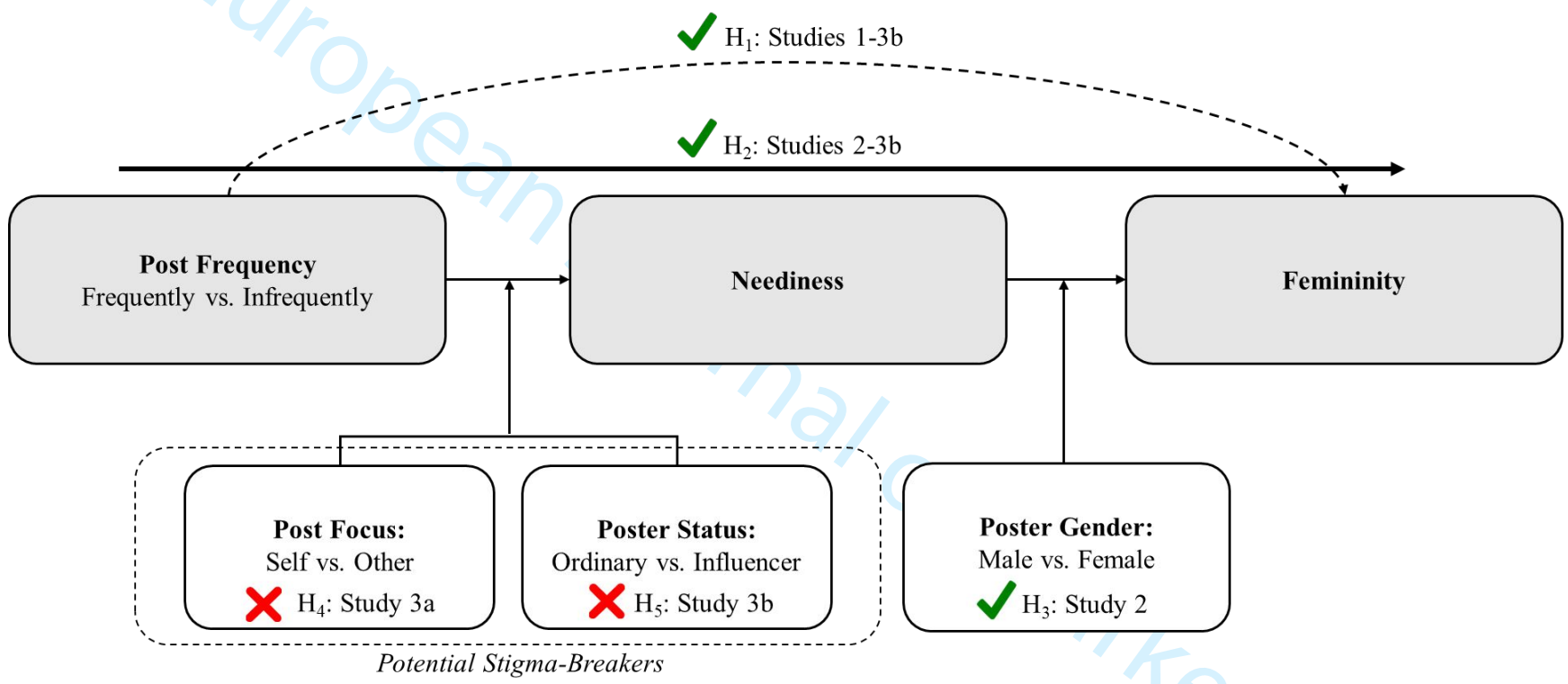
Potential Stigma-Breakers

Figure 2.
Manipulations: Studies 1 and 2

STUDY 1:

On the next few pages, you will evaluate a normal, average, ordinary man who **FREQUENTLY (RARELY) posts on social media**. He does so with his personal accounts for fun (i.e., it is not for work). He has a moderate or average number of followers, and he follows more accounts than follow him. His followers on social media are people he has personally met in his life, and he follows them back. He is not an influencer.

STUDY 2:

On the next few pages, you will evaluate a normal, average, ordinary **MAN (WOMAN)** who **FREQUENTLY (RARELY) posts on social media**. He (She) does so with his (her) personal accounts for fun (i.e., it is not for work). He (She) has a moderate or average number of followers, and he (she) follows more accounts than follow him (her). His (Her) followers on social media are people he (she) has personally met in his (her) life, and he (she) follows them back. He (She) is not an influencer.

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Figure 3.
Moderated mediation results

Index of Moderated Mediation: b = 0.30 95% CI [0.10, 0.51]

Poster Gender = Male: Post Frequency → Neediness → Femininity, b = 0.17, 95% CI [0.03, 0.32]

Poster Gender = Female: Post Frequency → Neediness → Femininity, b = -0.12 95% CI [-0.29, 0.02]

Figure 4.

Effects of post frequency on perceived neediness and femininity
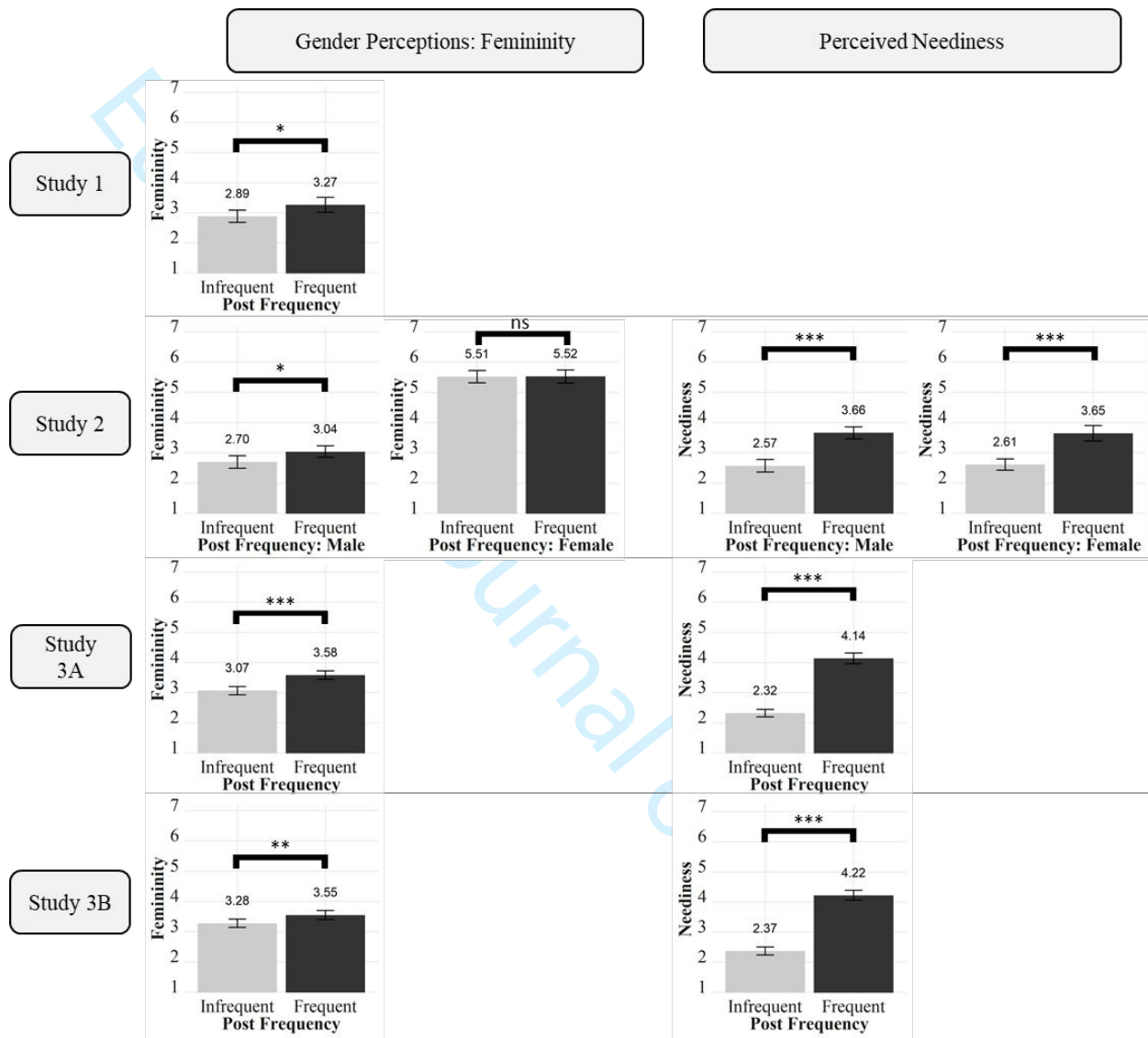
Error bars represent 95% CI
* $p < .05$; ** $p < .01$; *** $p < .001$

Figure 5.

Manipulations: Studies 3A and 3B

STUDY 3A:

On the next few pages, you will evaluate a normal, average, ordinary man who **FREQUENTLY (RARELY) posts on social media**. He does so with his personal accounts for fun (i.e., it is not for work). He has a moderate or average number of followers, and he follows more accounts than follow him. His followers on social media are people he has personally met in his life, and he follows them back. He is not an influencer.

Post Focus: Self
His social media posts are almost entirely about **himself and the things he is doing**. His posts are NOT about others.

Post Focus: Other
His social media posts are almost entirely about **other people, events, places, and things**. His posts are NOT about himself.

STUDY 3B:

Poster Status: Ordinary User
On the next few pages, you will evaluate a man who **FREQUENTLY (RARELY) posts on social media**. He is an ordinary man; **others would *not* consider him an influencer**. He has a moderate or average number of followers, and he follows more accounts than follow him. His followers on social media are people he has personally met in his life, and he follows them back.

Poster Status: Influencer
On the next few pages, you will evaluate a man who **FREQUENTLY (RARELY) posts on social media**. He is a social media influencer; **others would consider him an influencer**. He has a a very high number of followers, and more people follow him than he follows back. His followers on social media are people from all over who are interested in what he posts.

WEB APPENDIX: THE FREQUENT-POSTING FEMININITY STEREOTYPE

STUDY 1: MAIN EFFECT OF POST FREQUENCY (OFTEN VS. RARE) ON PERCEIVED FEMININITY

METHODS

Direct describing task:
- "Pick a name or nickname for this ordinary man who has a moderate, average number of followers." [Note: Response was piped into later text.]
- "Please write one or two adjectives that describe why _____ (frequently/rarely) posts on social media."

Gender perception measure (DV):
- "How masculine is _____?" (1 = not at all, 7 = very)
- "How feminine is _____?" (1 = not at all, 7 = very)

Other focal poster-related measures:
- *Poster-related demographics*—see measures below.
  - "How old is _____?" (text entry)
  - "How educated is _____?" (1 = not at all, 7 = very)
  - "How wealthy is _____?" (1 = not at all, 7 = very)

Participant demographics:
- *Gender*: "With which gender do you most identify?" (0 = woman, 1 = man, 2 = other/prefer not to say)
- *Age*: "What is your age?" (text entry)
- *Political ideology*: "Generally speaking, I identify as…" (1 = politically liberal, 7 = politically conservative)
- *Social media activity*: Approximated through participants' estimated time scrolling through and posting on social media (1 = very rarely, 7 = very often).
  - "How often do you scroll through social media platforms?"
  - "How often do you post on social media platforms?"

Manipulation checks:
- *How often does [name piped] post on social media?* (1 = rarely, 7 = frequently)

Independent Samples T-Test

	t	df	p	Cohen's d
manip_chk	37.303	157	< .001 [a]	5.918

Group Descriptives

Group		N	Mean	SD	SE	Coefficient of variation
manip_chk	FREQUENTLY	78	6.282	1.018	0.115	0.162
	RARELY	81	1.333	0.612	0.068	0.459

STUDY 1 SUPPLEMENTAL STATISTICS

Feminine

Independent Samples T-Test

	t	df	p	Cohen's d
Feminine	2.344	162	0.020	0.366

Note. Student's t-test.

Group Descriptives

Group		N	Mean	SD	SE	Coefficient of variation
Feminine	FREQUENTLY	79	3.266	1.115	0.125	0.341
	RARELY	85	2.888	0.946	0.103	0.328

Controls - Feminine
ANCOVA - Feminine

Cases	Sum of Squares	df	Mean Square	F	p
Post Frequency	5.053	1	5.053	5.456	0.021
his_age	1.359	1	1.359	1.467	0.228
his_edu_1	0.838	1	0.838	0.905	0.343
his_wealth_1	2.436	1	2.436	2.631	0.107
i_read_1	1.373	1	1.373	1.483	0.226
i_post_1	0.054	1	0.054	0.058	0.810
pol_id_1	11.308	1	11.308	12.210	< .001
gender	0.324	1	0.324	0.350	0.555
Residuals	112.987	122	0.926		

Note. Type III Sum of Squares

STUDY 2: POST FREQUENCY (OFTEN VS. RARE) × POSTER GENDER (MAN VS. WOMAN) ON PERCEIVED FEMININITY

METHODS

Direct describing task:
- "Pick a name or nickname for this ordinary man/woman who has a moderate, average number of followers." [Note: Response was piped into later text.]
- "Please write one or two adjectives that describe *why* _____ (frequently/rarely) posts on social media."

Trait neediness measure (mediator):
- Needy (1 = strongly disagree, 7 = strongly agree).
- Independent (1 = strongly disagree, 7 = strongly agree).

Gender Perceptions (Femininity):
- "How masculine is _____?" (1 = not at all, 7 = very)
- "How feminine is _____?" (1 = not at all, 7 = very)

Other focal poster-related measures:
- *Poster-related demographics*—see measures below.
    o "How old is _____?" (text entry)
    o "How educated is _____?" (1 = not at all, 7 = very)
    o "How wealthy is _____?" (1 = not at all, 7 = very)

Participant demographics:
- *Gender*: "With which gender do you most identify?" (0 = woman, 1 = man, 2 = other/prefer not to say)
- *Age*: "What is your age?" (text entry)
- *Social media activity*: Approximated through participants' estimated time scrolling through and posting on social media (1 = very rarely, 7 = very often).
    o "How often do you scroll through social media platforms?"
    o "How often do you post on social media platforms?"

Manipulation checks:
- *How often does [name piped] post on social media?* (1 = rarely, 7 = frequently)

Independent Samples T-Test

	t	df	p	Cohen's d
Manip_Chk	-45.456	398	< .001	-4.547

Note. Student's t-test.

Group Descriptives

	Group	N	Mean	SD	SE	Coefficient of variation
Manip_Chk	Rarely Posts	204	1.618	1.154	0.081	0.713
	Frequently Posts	196	6.378	0.923	0.066	0.145

STUDY 2 SUPPLEMENTAL STATISTICS

*Process Model 14: Post Frequency → Needy * Poster Gender → Femininity*

```
***************** PROCESS Procedure for SPSS Version 4.0 *****************

         Written by Andrew F. Hayes, Ph.D.        www.afhayes.com
     Documentation available in Hayes (2022). www.guilford.com/p/hayes3

*************************************************************************
Model  : 14
    Y  : msc1fem7
    X  : IV_Posts
    M  : Needy
    W  : Char_Mal

Sample
Size:  400

*************************************************************************
OUTCOME VARIABLE:
 Needy

Model Summary
          R       R-sq       MSE         F        df1        df2          p
      .4423      .1957    1.1599    96.8181     1.0000   398.0000      .0000

Model
              coeff        se         t         p        LLCI       ULCI
constant     2.5931     .0754   34.3899     .0000      2.4449     2.7414
IV_Posts     1.0599     .1077    9.8396     .0000       .8482     1.2717

Covariance matrix of regression parameter estimates:
          constant   IV_Posts
constant    .0057     -.0057
IV_Posts   -.0057      .0116

*************************************************************************
OUTCOME VARIABLE:
 msc1fem7

Model Summary
          R       R-sq       MSE         F        df1        df2          p
      .7923      .6278    1.0745   166.5471     4.0000   395.0000      .0000

Model
              coeff        se         t         p        LLCI       ULCI
constant     5.8137     .2046   28.4146     .0000      5.4114     6.2159
IV_Posts      .1456     .1157    1.2584     .2090      -.0818      .3730
Needy        -.1176     .0645   -1.8223     .0692      -.2444      .0093
Char_Mal    -3.5266     .2887  -12.2169     .0000     -4.0941    -2.9590
Int_1         .2809     .0866    3.2447     .0013       .1107      .4511

Product terms key:
 Int_1    :        Needy     x        Char_Mal

Covariance matrix of regression parameter estimates:
          constant   IV_Posts      Needy   Char_Mal      Int_1
constant    .0419      .0008     -.0118     -.0418       .0117
IV_Posts    .0008      .0134     -.0023      .0006      -.0003
```

```
Needy         -.0118      -.0023      .0042       .0116      -.0037
Char_Mal      -.0418       .0006      .0116       .0833      -.0233
Int_1          .0117      -.0003     -.0037      -.0233       .0075

Test(s) of X by M interaction:
          F         df1         df2          p
     2.9659      1.0000    394.0000      .0858

Test(s) of highest order unconditional interaction(s):
        R2-chng          F         df1         df2          p
M*W        .0099     10.5281      1.0000    395.0000      .0013
----------
    Focal predict: Needy    (M)
          Mod var: Char_Mal (W)

Conditional effects of the focal predictor at values of the moderator(s):

   Char_Mal     Effect          se           t           p        LLCI        ULCI
     .0000     -.1176       .0645     -1.8223       .0692      -.2444       .0093
    1.0000      .1633       .0651      2.5079       .0125       .0353       .2914

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   Needy      Char_Mal    msc1fem7   .
BEGIN DATA.
    2.0000      .0000      5.6499
    3.0000      .0000      5.5323
    4.5000      .0000      5.3560
    2.0000     1.0000      2.6851
    3.0000     1.0000      2.8484
    4.5000     1.0000      3.0935
END DATA.
GRAPH/SCATTERPLOT=
 Needy    WITH    msc1fem7 BY       Char_Mal .

****************** CORRELATIONS BETWEEN MODEL RESIDUALS ******************

             Needy    msc1fem7
Needy       1.0000       .0000
msc1fem7     .0000      1.0000

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y ****************

Direct effect of X on Y
     Effect          se           t           p        LLCI        ULCI
      .1456       .1157      1.2584       .2090      -.0818       .3730

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 IV_Posts    ->    Needy      ->    msc1fem7

   Char_Mal     Effect      BootSE    BootLLCI    BootULCI
     .0000     -.1246       .0771     -.2879       .0185
    1.0000      .1731       .0746      .0299       .3230

Index of moderated mediation (difference between conditional indirect effects):
             Index      BootSE    BootLLCI    BootULCI
Char_Mal     .2977       .1031      .1013       .5103

 Pairwise contrasts between conditional indirect effects (Effect1 minus Effect2)
```

```
          Effect1    Effect2    Contrast     BootSE    BootLLCI    BootULCI
           .1731     -.1246      .2977       .1031      .1013       .5103
       ---

       ********************** ANALYSIS NOTES AND ERRORS **********************

       Level of confidence for all confidence intervals in output:
         95.0000

       Number of bootstrap samples for percentile bootstrap confidence intervals:
         5000
```

Feminine

ANOVA - msc1fem7

Cases	Sum of Squares	df	Mean Square	F	p	η²
IV_Posts	2.996	1	2.996	2.738	0.099	0.003
Char_Male	700.604	1	700.604	640.443	< .001	0.615
IV_Posts ∗ Char_Male	2.770	1	2.770	2.532	0.112	0.002
Residuals	433.199	396	1.094			

Note. Type III Sum of Squares

Descriptives - msc1fem7

Char_Male	IV_Posts	Mean	SD	N
Female Poster	Frequently Posts	5.522	1.060	93
	Rarely Posts	5.515	1.048	101
Male Poster	Frequently Posts	3.039	0.994	103
	Rarely Posts	2.699	1.081	103

Repeated Contrast - IV_Posts ∗ Char_Male

Comparison	Estimate	SE	df	t	p
Female: Frequent vs. Infrequent	-0.007	0.150	396	-0.044	0.965
Male: Frequent vs. Infrequent	-0.340	0.146	396	-2.332	0.020

Neediness

ANOVA - Needy

Cases	Sum of Squares	df	Mean Square	F	p	η²
IV_Posts	112.021	1	112.021	96.113	< .001	0.195
Char_Male	0.017	1	0.017	0.014	0.904	2.944e-5
IV_Posts ∗ Char_Male	0.078	1	0.078	0.067	0.795	1.368e-4
Residuals	461.542	396	1.166			

Note. Type III Sum of Squares

Descriptives - Needy

Char_Male	IV_Posts	Mean	SD	N
Female Poster	Frequently Posts	3.645	1.241	93
	Rarely Posts	2.614	0.964	101
Male Poster	Frequently Posts	3.660	1.041	103
	Rarely Posts	2.573	1.067	103

Repeated Contrast - IV_Posts ∗ Char_Male

Comparison	Estimate	SE	df	t	p
Female: Frequent vs. Infrequent	-1.031	0.155	396	-6.647	< .001
Male: Frequent vs. Infrequent	-1.087	0.150	396	-7.228	< .001

Controls – Femininity

ANCOVA - MSC1FEM7

Cases	Sum of Squares	df	Mean Square	F	p
IV_Posts	2.226	1	2.226	2.046	0.153
Char_Male	651.947	1	651.947	599.032	< .001
IV_Posts ∗ Char_Male	3.047	1	3.047	2.800	0.095
His_Age	1.101	1	1.101	1.011	0.315
His_Edu	0.350	1	0.350	0.322	0.571
His_Wealth	0.391	1	0.391	0.359	0.549
I_Read	0.083	1	0.083	0.076	0.783
I_Post	5.378e-4	1	5.378e-4	4.941e-4	0.982
I_Gender	4.399	1	4.399	4.042	0.045
I_Age	0.397	1	0.397	0.365	0.546
Residuals	423.363	389	1.088		

Note. Type III Sum of Squares

Controls – Neediness

ANCOVA - Needy

Cases	Sum of Squares	df	Mean Square	F	p
IV_Posts	68.471	1	68.471	65.403	< .001
Char_Male	0.243	1	0.243	0.232	0.630
IV_Posts ∗ Char_Male	0.006	1	0.006	0.006	0.938
His_Age	0.006	1	0.006	0.006	0.939

ANCOVA - Needy

Cases	Sum of Squares	df	Mean Square	F	p
His_Edu	39.718	1	39.718	37.938	< .001
His_Wealth	1.862	1	1.862	1.778	0.183
I_Read	2.090	1	2.090	1.996	0.158
I_Post	0.249	1	0.249	0.238	0.626
I_Gender	2.559	1	2.559	2.444	0.119
I_Age	1.482	1	1.482	1.415	0.235
Residuals	407.252	389	1.047		

Note. Type III Sum of Squares

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STUDY 3A: POST FREQUENCY (OFTEN VS. RARE) × POST FOCUS (SELF VS. OTHERS) ON PERCEIVED FEMININITY

METHODS

Direct describing task:
- "Pick a name or nickname for this ordinary man who has a moderate, average number of followers and posts about himself and the things he is doing/other people, events, places, and things." [Note: Response was piped into later text.]
- "Please write one or two adjectives that describe why _____ (frequently/rarely) posts on social media."

Trait neediness measure (mediator):
- Needy (1 = strongly disagree, 7 = strongly agree).
- Independent (1 = strongly disagree, 7 = strongly agree).
- Alternative operationalization adapted from items in Rude and Burnham's (1995) Sociotropy/Autonomy Scale (1 = strongly disagree, 7 = strongly agree).
    - "When _____ is with other people, he looks for signs of whether or not they like being with him."
    - "If a friend has not called _____ in a while, _____ gets concerned that the friend has forgotten him."
    - "He is more concerned about whether people like him than he is about having important achievements."

Gender Perceptions (Femininity):
- "How masculine is _____?" (1 = not at all, 7 = very)
- "How feminine is _____?" (1 = not at all, 7 = very)

Other focal poster-related measures:
- *Poster-related demographics*: see measures below.
    - "How old is _____?" (text entry)
    - "How educated is _____?" (1 = not at all, 7 = very)
    - "How wealthy is _____?" (1 = not at all, 7 = very)
- *Most frequent platform to post*: 1 = Facebook, 2 = Instagram, 3 = YouTube, 4 = TikTok, 5 = Twitter, 6 = Snapchat, 7 = Reddit, 8 = LinkedIn, 9 = Other
    - Coded as categorical

Participant demographics:
- *Gender*: "With which gender do you most identify?" (0 = woman, 1 = man, 2 = other/prefer not to say)
- *Age*: "What is your age?" (text entry)
- *Social media activity*: Approximated through participants' estimated time scrolling through and posting on social media (1 = very rarely, 7 = very often).
    - "How often do you scroll through social media platforms?"
    - "How often do you post on social media platforms?"

Manipulation checks:

- *How often does [name piped] post on social media?* (1 = rarely, 7 = frequently)

Independent Samples T-Test

	t	df	p	Mean Difference	SE Difference	Cohen's d
MC_Post_Freq	-34.761	394	< .001	-4.212	0.121	-3.494

Note. Student's t-test.

Group Descriptives

	Group	N	Mean	SD	SE	Coefficient of variation
MC_Post_Freq	Rarely posts	198	1.848	1.191	0.085	0.644
	Frequently posts	198	6.061	1.220	0.087	0.201

- *What are his posts usually about?* (1 = himself, 7 = other people)

Independent Samples T-Test

	t	df	p	Mean Difference	SE Difference	Cohen's d
MC_Focus	53.268	394	< .001 [a]	5.302	0.100	5.354

Note. Student's t-test.

[a] Levene's test is significant (p < .05), suggesting a violation of the equal variance assumption

Group Descriptives

	Group	N	Mean	SD	SE	Coefficient of variation
MC_Focus	Other-focused	197	6.533	1.219	0.087	0.187
	Self-focused	199	1.231	0.694	0.049	0.564

STUDY 3A SUPPLEMENTAL STATISTICS

Post Frequency

Independent Samples T-Test

	t	df	p	Mean Difference	SE Difference	Cohen's d
Needy_Avg	-16.225	394	< .001 [a]	-1.818	0.112	-1.631
Feminine	-5.126	394	< .001	-0.513	0.100	-0.515

Note. Student's t-test.

[a] Levene's test is significant (p < .05), suggesting a violation of the equal variance assumption

Group Descriptives

DV	Group	N	Mean	SD	SE	Coefficient of variation
Needy_Avg	Rarely posts	198	2.321	0.909	0.065	0.392
	Frequently posts	198	4.139	1.288	0.092	0.311
Feminine	Rarely posts	198	3.068	0.967	0.069	0.315
	Frequently posts	198	3.581	1.022	0.073	0.285

Post Frequency x Post Focus: Femininity

ANOVA - Feminine

Cases	Sum of Squares	df	Mean Square	F	p
IV_Posts	26.001	1	26.001	26.175	< .001
IV_Focus	0.470	1	0.470	0.473	0.492
IV_Posts ∗ IV_Focus	0.177	1	0.177	0.178	0.673
Residuals	389.390	392	0.993		

Note. Type III Sum of Squares

Descriptives - Feminine

IV_Posts	IV_Focus	Mean	SD	N
Frequently posts	Other-focused	3.636	0.997	99
	Self-focused	3.525	1.048	99
Rarely posts	Other-focused	3.082	0.943	98
	Self-focused	3.055	0.995	100

Custom Contrast - IV_Posts ∗ IV_Focus

Comparison	Estimate	SE	df	t	p
Frequent Poster: Self vs. Other Focus	0.111	0.142	392	0.784	0.433
Infrequent Poster: Self vs. Other Focus	0.027	0.142	392	0.188	0.851
Other-focused Poster: Freq. vs. Infreq	-0.555	0.142	392	-3.906	< .001
Self-focused Poster: Freq. vs. Infreq	-0.470	0.141	392	-3.328	< .001

ANCOVA - Feminine

Cases	Sum of Squares	df	Mean Square	F	p
IV_Posts	26.408	1	26.408	26.618	< .001
IV_Focus	0.477	1	0.477	0.480	0.489
IV_Posts ∗ IV_Focus	0.198	1	0.198	0.199	0.655
His_Platform	1.476	1	1.476	1.487	0.223
Residuals	387.915	391	0.992		

Note. Type III Sum of Squares

Post Frequency x Post Focus: Neediness

ANOVA - Needy_Avg

Cases	Sum of Squares	df	Mean Square	F	p
IV_Posts	326.629	1	326.629	264.599	< .001
IV_Focus	2.529	1	2.529	2.048	0.153
IV_Posts ∗ IV_Focus	3.391	1	3.391	2.747	0.098
Residuals	483.896	392	1.234		

Note. Type III Sum of Squares

Descriptives - Needy_Avg

IV_Posts	IV_Focus	Mean	SD	N
Frequently posts	Other-focused	4.126	1.280	99
	Self-focused	4.152	1.302	99
Rarely posts	Other-focused	2.495	0.967	98
	Self-focused	2.150	0.818	100

Custom Contrast - IV_Posts ∗ IV_Focus

Comparison	Estimate	SE	df	t	p
Frequent Poster: Self vs. Other Focus	-0.025	0.158	392	-0.160	0.873
Infrequent Poster: Self vs. Other Focus	0.345	0.158	392	2.184	0.030
Other-focused Poster: Freq. vs. Infreq	-1.631	0.158	392	-10.304	< .001
Self-focused Poster: Freq. vs. Infreq	-2.002	0.158	392	-12.706	< .001

ANCOVA - Needy_Avg

Cases	Sum of Squares	df	Mean Square	F	p
IV_Posts	328.040	1	328.040	266.177	< .001
IV_Focus	2.548	1	2.548	2.067	0.151
IV_Posts ∗ IV_Focus	3.284	1	3.284	2.665	0.103
His_Platform	2.024	1	2.024	1.642	0.201
Residuals	481.872	391	1.232		

Note. Type III Sum of Squares

Process Model 4: Post Frequency → Needy → Femininity

```
***************** PROCESS Procedure for SPSS Version 4.0 *****************
```

```
              Written by Andrew F. Hayes, Ph.D.        www.afhayes.com
        Documentation available in Hayes (2022). www.guilford.com/p/hayes3

    ************************************************************************
    Model  : 4
        Y  : Feminine
        X  : IV_Posts
        M  : Needy_Av

    Sample
    Size:  396

    ************************************************************************
    OUTCOME VARIABLE:
     Needy_Av

    Model Summary
              R       R-sq        MSE          F        df1        df2          p
          .6329      .4005     1.2432   263.2530     1.0000   394.0000      .0000

    Model
                  coeff         se          t          p       LLCI       ULCI
    constant     2.3207      .0792    29.2877      .0000     2.1649     2.4765
    IV_Posts     1.8182      .1121    16.2251      .0000     1.5979     2.0385

    Standardized coefficients
                  coeff
    IV_Posts     1.2642

    Covariance matrix of regression parameter estimates:
              constant   IV_Posts
    constant      .0063     -.0063
    IV_Posts     -.0063      .0126

    ************************************************************************
    OUTCOME VARIABLE:
     Feminine

    Model Summary
              R       R-sq        MSE          F        df1        df2          p
          .3475      .1208      .9308    26.9923     2.0000   393.0000      .0000

    Model
                  coeff         se          t          p       LLCI       ULCI
    constant     2.5520      .1222    20.8819      .0000     2.3117     2.7923
    IV_Posts      .1082      .1252      .8641      .3881     -.1380      .3544
    Needy_Av      .2224      .0436     5.1024      .0000      .1367      .3081

    Standardized coefficients
                  coeff
    IV_Posts      .1054
    Needy_Av      .3117

    Covariance matrix of regression parameter estimates:
              constant   IV_Posts   Needy_Av
    constant      .0149      .0033     -.0044
    IV_Posts      .0033      .0157     -.0035
    Needy_Av     -.0044     -.0035      .0019

    Test(s) of X by M interaction:
              F        df1        df2          p
          .0852     1.0000   392.0000      .7705

    ************************* TOTAL EFFECT MODEL ***************************
```

European Journal of Marketing

```
OUTCOME VARIABLE:
 Feminine

Model Summary
          R        R-sq        MSE          F        df1        df2          p
      .2501       .0625       .9899    26.2801     1.0000   394.0000       .0000

Model
              coeff          se           t           p        LLCI        ULCI
constant     3.0682       .0707     43.3919       .0000      2.9292      3.2072
IV_Posts      .5126       .1000      5.1264       .0000       .3160       .7092

Standardized coefficients
              coeff
IV_Posts      .4995

Covariance matrix of regression parameter estimates:
           constant    IV_Posts
constant      .0050      -.0050
IV_Posts     -.0050       .0100

****************** CORRELATIONS BETWEEN MODEL RESIDUALS ******************


           Needy_Av    Feminine
Needy_Av    1.0000       .0000
Feminine     .0000      1.0000

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect          se           t           p        LLCI        ULCI        c_ps
      .5126       .1000      5.1264       .0000       .3160       .7092       .4995

Direct effect of X on Y
     Effect          se           t           p        LLCI        ULCI       c'_ps
      .1082       .1252       .8641       .3881      -.1380       .3544       .1054

Indirect effect(s) of X on Y:
              Effect      BootSE    BootLLCI    BootULCI
Needy_Av       .4044       .0934       .2238       .5910

Partially standardized indirect effect(s) of X on Y:
              Effect      BootSE    BootLLCI    BootULCI
Needy_Av       .3940       .0859       .2235       .5629

*********************** ANALYSIS NOTES AND ERRORS ***********************

Level of confidence for all confidence intervals in output:
   95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
   5000
```

Process Model 7: Post Frequency*Post Focus → Needy → Femininity

```
***************** PROCESS Procedure for SPSS Version 4.0 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

************************************************************************
```

```
Model : 7
    Y : Feminine
    X : IV_Posts
    M : Needy_Av
    W : IV_Focus

Sample
Size: 396

*************************************************************************
OUTCOME VARIABLE:
 Needy_Av

Model Summary
          R        R-sq        MSE          F        df1        df2          p
      .6386       .4078     1.2344    89.9719     3.0000   392.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     2.4949      .1122    22.2297      .0000     2.2742     2.7156
IV_Posts     1.6314      .1583    10.3042      .0000     1.3201     1.9426
IV_Focus     -.3449      .1579    -2.1839      .0296     -.6554     -.0344
Int_1         .3702      .2233     1.6574      .0982     -.0689      .8092

Product terms key:
 Int_1    :        IV_Posts x        IV_Focus

Covariance matrix of regression parameter estimates:
          constant    IV_Posts    IV_Focus      Int_1
constant      .0126      -.0126      -.0126      .0126
IV_Posts     -.0126       .0251       .0126     -.0251
IV_Focus     -.0126       .0126       .0249     -.0249
Int_1         .0126      -.0251      -.0249      .0499

Test(s) of highest order unconditional interaction(s):
       R2-chng         F        df1        df2          p
X*W      .0041    2.7469     1.0000   392.0000      .0982
----------
   Focal predict: IV_Posts (X)
         Mod var: IV_Focus (W)

Conditional effects of the focal predictor at values of the moderator(s):

   IV_Focus     Effect         se          t          p       LLCI       ULCI
     .0000     1.6314      .1583    10.3042      .0000     1.3201     1.9426
    1.0000     2.0015      .1575    12.7062      .0000     1.6918     2.3112

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   IV_Posts    IV_Focus    Needy_Av    .
BEGIN DATA.
     .0000       .0000     2.4949
    1.0000       .0000     4.1263
     .0000      1.0000     2.1500
    1.0000      1.0000     4.1515
END DATA.
GRAPH/SCATTERPLOT=
 IV_Posts WITH     Needy_Av BY       IV_Focus .

*************************************************************************
OUTCOME VARIABLE:
```

```
 Feminine

Model Summary
          R        R-sq        MSE          F         df1         df2           p
      .3475       .1208      .9308    26.9923      2.0000    393.0000       .0000

Model
               coeff         se           t          p        LLCI        ULCI
constant      2.5520      .1222     20.8819      .0000      2.3117      2.7923
IV_Posts       .1082      .1252       .8641      .3881      -.1380       .3544
Needy_Av       .2224      .0436      5.1024      .0000       .1367       .3081

Covariance matrix of regression parameter estimates:
           constant   IV_Posts    Needy_Av
constant       .0149      .0033      -.0044
IV_Posts       .0033      .0157      -.0035
Needy_Av      -.0044     -.0035       .0019

Test(s) of X by M interaction:
           F        df1        df2          p
      .0852     1.0000    392.0000      .7705

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
     Effect         se           t          p        LLCI        ULCI
      .1082      .1252       .8641      .3881      -.1380       .3544

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 IV_Posts     ->    Needy_Av     ->     Feminine

   IV_Focus      Effect      BootSE    BootLLCI    BootULCI
      .0000       .3629       .0888       .1971       .5418
     1.0000       .4452       .1046       .2444       .6581

Index of moderated mediation (difference between conditional indirect effects):
              Index      BootSE    BootLLCI    BootULCI
IV_Focus      .0823       .0532      -.0098       .1958

 Pairwise contrasts between conditional indirect effects (Effect1 minus Effect2)
     Effect1     Effect2    Contrast      BootSE    BootLLCI    BootULCI
      .4452       .3629       .0823       .0532      -.0098       .1958
---

*********************** ANALYSIS NOTES AND ERRORS ***********************

Level of confidence for all confidence intervals in output:
   95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
   5000
```

STUDY 3B: POST FREQUENCY (OFTEN VS. RARE) × POSTER STATUS (ORDINARY VS. INFLUENCER) ON PERCEIVED FEMININITY

METHODS

Direct describing task:
- "Pick a name or nickname for this ordinary man with a moderate, average number of followers/man who is a social media influencer with many social media followers." [Note: Response was piped into later text.]
- "Please write one or two adjectives that describe why _____ (frequently/rarely) posts on social media."

Trait neediness measure (mediator):
- Needy (1 = strongly disagree, 7 = strongly agree).
- Independent (1 = strongly disagree, 7 = strongly agree).
- Alternative operationalization adapted from items in Rude and Burnham's (1995) Sociotropy/Autonomy Scale (1 = strongly disagree, 7 = strongly agree).
  - "When _____ is with other people, he looks for signs of whether or not they like being with him."
  - "If a friend has not called _____ in a while, _____ gets concerned that the friend has forgotten him."
  - "He is more concerned about whether people like him than he is about having important achievements."

Gender Perceptions (Femininity):
- "How masculine is _____?" (1 = not at all, 7 = very)
- "How feminine is _____?" (1 = not at all, 7 = very)

Other focal poster-related measures:
- *Poster-related demographics*: see measures below.
  - "How old is _____?" (text entry)
  - "How educated is _____?" (1 = not at all, 7 = very)
  - "How wealthy is _____?" (1 = not at all, 7 = very)
- *Most frequent platform to post*: 1 = Facebook, 2 = Instagram, 3 = YouTube, 4 = TikTok, 5 = Twitter, 6 = Snapchat, 7 = Reddit, 8 = LinkedIn, 9 = Other

Participant demographics:
- *Gender*: "With which gender do you most identify?" (0 = woman, 1 = man, 2 = other/prefer not to say)
- *Age*: "What is your age?" (text entry)
- *Social media activity*: Approximated through participants' estimated time scrolling through and posting on social media (1 = very rarely, 7 = very often).
  - "How often do you scroll through social media platforms?"
  - "How often do you post on social media platforms?"

Manipulation checks:

- *How often does [name piped] post on social media?* (1 = Rarely, 7 = Frequently)

Independent Samples T-Test

	t	df	p	Mean Difference	SE Difference	Cohen's d
mc_freq7_1	-48.784	400	< .001 [a]	-5.014	0.103	-4.867

Note. Student's t-test.

[a] Levene's test is significant (p < .05), suggesting a violation of the equal variance assumption

Group Descriptives

	Group	N	Mean	SD	SE	Coefficient of variation
mc_freq7_1	no	203	1.424	0.984	0.069	0.691
	yes	199	6.437	1.075	0.076	0.167

- *Is [name piped] a social media influencer?* (1 = Definitely no, 7 = Definitely yes)

Independent Samples T-Test

	t	df	p	Mean Difference	SE Difference	Cohen's d
mc_infl7_1	-41.123	400	< .001 [a]	-4.705	0.114	-4.102

Note. Student's t-test.

[a] Levene's test is significant (p < .05), suggesting a violation of the equal variance assumption

Group Descriptives

	Group	N	Mean	SD	SE	Coefficient of variation
mc_infl7_1	no	202	1.510	1.033	0.073	0.684
	yes	200	6.215	1.252	0.089	0.201

STUDY 3B SUPPLEMENTAL STATISTICS

Post Frequency

Independent Samples T-Test

DV	t	df	p	Mean Difference	SE Difference	Cohen's d
msc1_fem7	-2.644	400	0.009	-0.272	0.103	-0.264
needy2	-17.161	400	< .001 [a]	-1.852	0.108	-1.712

Note. Student's t-test.

[a] Levene's test is significant (p < .05), suggesting a violation of the equal variance assumption

Group Descriptives

	Group	N	Mean	SD	SE	Coefficient of variation
msc1_fem7	no	203	3.278	0.975	0.068	0.297
	yes	199	3.550	1.085	0.077	0.306
needy2	no	203	2.372	0.974	0.068	0.411
	yes	199	4.224	1.181	0.084	0.280

Post Frequency x Post Focus: Femininity

ANOVA - msc1_fem7

Cases	Sum of Squares	df	Mean Square	F	p	η²
frequently_vs_very_rarely	6.779	1	6.779	6.407	0.012	0.016
influencer	2.529	1	2.529	2.390	0.123	0.006
frequently_vs_very_rarely ∗ influencer	1.326	1	1.326	1.253	0.264	0.003
Residuals	421.133	398	1.058			

Note. Type III Sum of Squares

Descriptives - msc1_fem7

frequently_vs_very_rarely	influencer	Mean	SD	N
FREQUENTLY	no	3.527	1.036	93
	yes	3.571	1.131	106
RARELY	no	3.151	1.003	109
	yes	3.426	0.924	94

Custom Contrast - frequently_vs_very_rarely ∗ influencer

Comparison	Estimate	SE	df	t	p
Frequent Poster: Influencer vs. Ordinary	-0.044	0.146	398	-0.300	0.764
Infrequent Poster: Influencer vs. Ordinary	-0.274	0.145	398	-1.893	0.059
Ordinary: Freq. vs. Infreq	0.376	0.145	398	2.586	0.010
Influencer: Freq. vs. Infreq	0.145	0.146	398	0.996	0.320

ANCOVA - msc1_fem7

Cases	Sum of Squares	df	Mean Square	F	p
frequently_vs_very_rarely	6.210	1	6.210	5.863	0.016
influencer	2.710	1	2.710	2.559	0.110
frequently_vs_very_rarely ∗ influencer	1.178	1	1.178	1.112	0.292
his_platform	0.681	1	0.681	0.643	0.423
Residuals	420.452	397	1.059		

Note. Type III Sum of Squares

Post Frequency x Post Focus: Neediness

ANOVA - needy2

Cases	Sum of Squares	df	Mean Square	F	p	η^2
frequently_vs_rarely	336.675	1	336.675	291.428	< .001	0.418
influencer	5.373	1	5.373	4.651	0.032	0.007
frequently_vs_rarely ∗ influencer	2.731	1	2.731	2.364	0.125	0.003
Residuals	459.793	398	1.155			

Note. Type III Sum of Squares

Descriptives - needy2

frequently_vs_rarely	influencer	Mean	SD	N
FREQUENTLY	no	4.188	1.111	93
	yes	4.255	1.245	106
RARELY	no	2.188	0.873	109
	yes	2.585	1.044	94

Custom Contrast - frequently_vs_rarely ∗ influencer

Comparison	Estimate	SE	df	t	p
Frequent Poster: Influencer vs. Ordinary	-0.067	0.153	398	-0.436	0.663
Infrequent Poster: Influencer vs. Ordinary	-0.397	0.151	398	-2.624	0.009
Ordinary: Freq. vs. Infreq	2.000	0.152	398	13.182	< .001
Influencer: Freq. vs. Infreq	1.670	0.152	398	10.964	< .001

ANCOVA - needy2

Cases	Sum of Squares	df	Mean Square	F	p
frequently_vs_very_rarely	331.671	1	331.671	286.388	< .001
influencer	5.391	1	5.391	4.655	0.032
frequently_vs_very_rarely ∗ influencer	2.680	1	2.680	2.314	0.129
his_platform	0.019	1	0.019	0.017	0.897
Residuals	459.774	397	1.158		

Note. Type III Sum of Squares

Process Model 4: Post Frequency → Needy → Femininity

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.0 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3


*************************************************************************
Model  : 4
```

```
      Y  : msc1_fem
      X  : iv_pos_1
      M  : needy2

Sample
Size:  402

**************************************************************************
OUTCOME VARIABLE:
 needy2

Model Summary
          R        R-sq         MSE           F         df1         df2           p
      .6512       .4241      1.1699    294.5139      1.0000    400.0000        .0000

Model
              coeff          se           t           p        LLCI        ULCI
constant     2.3719       .0759     31.2442       .0000      2.2227      2.5212
iv_pos_1     1.8517       .1079     17.1614       .0000      1.6396      2.0638

Standardized coefficients
              coeff
iv_pos_1     1.3008

Covariance matrix of regression parameter estimates:
          constant    iv_pos_1
constant       .0058      -.0058
iv_pos_1      -.0058       .0116


**************************************************************************
OUTCOME VARIABLE:
 msc1_fem

Model Summary
          R        R-sq         MSE           F         df1         df2           p
      .2863       .0820        .9950     17.8120      2.0000    399.0000        .0000

Model
              coeff          se           t           p        LLCI        ULCI
constant     2.6980       .1299     20.7760       .0000      2.4427      2.9533
iv_pos_1     -.1811       .1311     -1.3815       .1679      -.4389       .0766
needy2        .2447       .0461      5.3062       .0000       .1540       .3353

Standardized coefficients
              coeff
iv_pos_1     -.1744
needy2        .3354

Covariance matrix of regression parameter estimates:
          constant    iv_pos_1      needy2
constant       .0169       .0044      -.0050
iv_pos_1       .0044       .0172      -.0039
needy2        -.0050      -.0039       .0021

Test(s) of X by M interaction:
           F         df1         df2           p
      1.4820      1.0000    398.0000       .2242

************************* TOTAL EFFECT MODEL *************************
OUTCOME VARIABLE:
 msc1_fem

Model Summary
```

```
              R        R-sq         MSE           F         df1         df2           p
           .1311       .0172      1.0626      6.9932      1.0000    400.0000       .0085

Model
                  coeff          se           t           p        LLCI        ULCI
constant        3.2783       .0723     45.3132       .0000      3.1361      3.4206
iv_pos_1         .2719       .1028      2.6445       .0085       .0698       .4741

Standardized coefficients
                  coeff
iv_pos_1         .2619

Covariance matrix of regression parameter estimates:
             constant    iv_pos_1
constant        .0052       -.0052
iv_pos_1       -.0052        .0106

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
      Effect          se           t           p        LLCI        ULCI        c_ps
       .2719       .1028      2.6445       .0085       .0698       .4741       .2619

Direct effect of X on Y
      Effect          se           t           p        LLCI        ULCI       c'_ps
      -.1811       .1311     -1.3815       .1679      -.4389       .0766      -.1744

Indirect effect(s) of X on Y:
             Effect      BootSE    BootLLCI    BootULCI
needy2        .4531       .0991       .2647       .6543

Partially standardized indirect effect(s) of X on Y:
             Effect      BootSE    BootLLCI    BootULCI
needy2        .4363       .0931       .2582       .6263

********************** ANALYSIS NOTES AND ERRORS **********************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000
```

*Process Model 7: Post Frequency*Post Focus → Needy → Femininity*

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.0 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

*************************************************************************
Model  : 7
    Y  : msc1_fem
    X  : iv_pos_1
    M  : needy2
    W  : influenc
```

```
Sample
Size:  402

***************************************************************************
OUTCOME VARIABLE:
 needy2

Model Summary
          R        R-sq        MSE          F        df1        df2          p
      .6589       .4341     1.1553   101.7763     3.0000   398.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant    2.1881      .1030    21.2537      .0000     1.9857     2.3905
iv_pos_1    2.0001      .1517    13.1823      .0000     1.7018     2.2984
influenc     .3970      .1513     2.6243      .0090      .0996      .6945
Int_1      -.3305      .2150    -1.5374      .1250     -.7531      .0921

Product terms key:
 Int_1    :          iv_pos_1 x         influenc

Covariance matrix of regression parameter estimates:
          constant   iv_pos_1   influenc      Int_1
constant     .0106     -.0106     -.0106      .0106
iv_pos_1    -.0106      .0230      .0106     -.0230
influenc    -.0106      .0106      .0229     -.0229
Int_1        .0106     -.0230     -.0229      .0462

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0034     2.3636     1.0000   398.0000      .1250
----------
    Focal predict: iv_pos_1 (X)
          Mod var: influenc (W)

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   iv_pos_1   influenc   needy2     .
BEGIN DATA.
     .0000      .0000     2.1881
    1.0000      .0000     4.1882
     .0000     1.0000     2.5851
    1.0000     1.0000     4.2547
END DATA.
GRAPH/SCATTERPLOT=
 iv_pos_1 WITH     needy2   BY        influenc .

***************************************************************************
OUTCOME VARIABLE:
 msc1_fem

Model Summary
          R        R-sq        MSE          F        df1        df2          p
      .2863       .0820      .9950    17.8120     2.0000   399.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant    2.6980      .1299    20.7760      .0000     2.4427     2.9533
iv_pos_1    -.1811      .1311    -1.3815      .1679     -.4389      .0766
needy2       .2447      .0461     5.3062      .0000      .1540      .3353
```

```
Covariance matrix of regression parameter estimates:
            constant   iv_pos_1     needy2
constant      .0169      .0044     -.0050
iv_pos_1      .0044      .0172     -.0039
needy2       -.0050     -.0039      .0021

Test(s) of X by M interaction:
       F          df1        df2          p
    1.4820     1.0000   398.0000      .2242

***************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
    Effect        se          t          p        LLCI       ULCI
    -.1811      .1311    -1.3815      .1679     -.4389      .0766

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 iv_pos_1     ->     needy2      ->     msc1_fem

   influenc    Effect     BootSE    BootLLCI    BootULCI
     .0000     .4894      .1070      .2846       .7007
    1.0000     .4085      .0958      .2342       .6110

Index of moderated mediation (difference between conditional indirect effects):
             Index     BootSE    BootLLCI    BootULCI
influenc    -.0809     .0555     -.1988       .0216

 Pairwise contrasts between conditional indirect effects (Effect1 minus Effect2)
    Effect1    Effect2    Contrast     BootSE    BootLLCI    BootULCI
     .4085      .4894     -.0809       .0555     -.1988       .0216
---

*********************** ANALYSIS NOTES AND ERRORS ***********************

Level of confidence for all confidence intervals in output:
   95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
   5000
```

Post Frequency × Post Focus (#108977)

Created: 10/08/2022 11:29 AM (PT)
Public: 05/11/2023 08:09 AM (PT)

Author(s)
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Nathan Warren (BI Norwegian Business School) - nathan.warren@bi.no

1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
H1) Men who post frequently (vs. rarely) on social media will be perceived to be needier and more feminine; neediness will mediate the effect on femininity.
H2) This effect will be moderated by post focus, such that men who frequently post about themselves (vs. others) are seen as needier and, thus, more feminine than men who frequently post about others.

3) Describe the key dependent variable(s) specifying how they will be measured.
Femininity is measured on a 7-point bi-polar scale anchored at "not at all" (1) and "very" feminine (7).
Neediness is measured using two items-"Independent" and "Needy"-on 7-point scales anchored at "strongly disagree" (1) and "strongly agree" (7).

4) How many and which conditions will participants be assigned to?
Four conditions. This study is has a 2 (post frequency: frequent vs. rare) × 2 (post focus: self vs. other).

For the two post frequency conditions, participants will read the following prompt: "On the next few pages, you will evaluate a normal, average, ordinary man who FREQUENTLY/RARELY posts on social media. He does this with his personal accounts for fun (i.e., it is not for work). He has a moderate or average number of followers, and he follows more accounts than follow him. His followers on social media are people he has personally met over his life, and he follows them back. He is not an influencer."

As for post focus, participants will be given additional information about the social media activity of the man described above.
- Self focus = "His social media posts are almost entirely about himself and the things he is doing. His posts are not about others."
- Other focus = "His social media posts are almost entirely about other people, events, places, and things. His posts are not about himself."

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
We will regress neediness and perceived femininity on post frequency, post focus, and the critical frequency × focus interaction. We will then decompose the omnibus interaction to evaluate the simple effect of post frequency at the two levels of post focus. Our prediction is that within the frequent post condition, self- (vs. other-) focused posts will be perceived as needier and more feminine.

Then, we will use Hayes' PROCESS model 7 to test the full hypothesized model, with IV = post frequency, moderator = post focus, mediator = neediness, and DV = femininity. We predict that perceived neediness will mediate the effect of post frequency on femininity, and this effect will be mitigated when the post is other- (vs. self-) focused.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
We will exclude participants who fail an attention check question asking them to select a particular response option.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
Our sample size will be approximately 400 participants.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
We will attempt to validate our two-item neediness measure by showing reliability with items from the Rude and Burnham (1995) "Connectedness and Neediness" scale. We predict that the combination of these items will have an alpha of .7 or greater. We will further explore additional possible effects of perceived character demographics (masculinity, posting platform, age, education, wealth) as well as participant demographics (gender, age, social media reading and posting habits).

AS PREDICTED

European Journal of Marketing

Wharton CREDIBILITY LAB UNIVERSITY *of* PENNSYLVANIA

Social Media + Masculinity: Post Frequency × Influencer (#111286)

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Author(s)
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1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
H1) Men who post frequently (vs. rarely) on social media will be perceived to be needier and more feminine. Neediness will mediate the effect of post frequency on perceived femininity.

H2) This effect will be moderated by poster influence, such that men who frequently post are only seen as needier and more feminine when they are ordinary social media users (i.e., NOT influencers).

3) Describe the key dependent variable(s) specifying how they will be measured.
Femininity will be measured on a 7-point bi-polar scale anchored at "not at all" (1) and "very" feminine (7).

Neediness will be measured with two items-"independent" and "needy"-on 7-point scales anchored at strongly disagree (1) and strongly agree (7).

4) How many and which conditions will participants be assigned to?
This study is a 2 (post frequency: frequent vs. rare) × 2 (poster influencer: influencer vs. ordinary).

The manipulations for the ordinary poster conditions are:
On the next few pages, you will evaluate a man who [frequently/rarely] posts on social media. He has a moderate number of followers, and he follows more accounts than follow him. His followers on social media are people he has personally met over his life, and he follows them back. Others would NOT consider him an influencer.

The manipulations for the influencer conditions are:
On the next few pages, you will evaluate a man who [frequently/rarely] posts on social media. He has a very high number of followers, and more people follow him than he follows back. His followers on social media are people from all over who are interested in what he posts. Others would consider him an influencer.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
We will use a between-subjects ANOVA to test for simple effects of post frequency within the influencer condition and ordinary condition.

Next, we will use PROCESS model 7 to test the full hypothesized model. Post frequency will be the IV, poster influence the moderator, neediness the mediator, and femininity the DV. We predict that perceived neediness will mediate the effect of post frequency on femininity, and this effect will be mitigated when the poster is considered a social media influencer.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
We will exclude participants who fail an attention check question asking them to select a particular response option.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
Our sample size will be approximately 400 participants.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
We will explore effects of posting frequency within the influencer conditions. Specifically, we have pre-registered that the influencer who posts frequently will be evaluated as less needy and less feminine than the ordinary person who posts frequently. We will explore how the rarely-posting influencer condition compares to other conditions.

We will also explore possible effects of perceived character demographics (masculinity, posting platform, age, education, wealth) as well as participant demographics (gender, age, social media reading and posting habits).

Finally, we are including three supplementary measures of neediness adapted from Rude and Burnham (1995) to confirm the efficacy of our two-item

neediness measure. Further, we are including a measure of perceived masculinity for comparison to the femininity measure. We expect all of the neediness measures to correlate significantly, and the masculinity and femininity measures to be significantly negatively correlated.