Novel explanations for misogynistic attitudes in society:

A relational examination using psychological factors extracted from Incel communities.

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Abstract

Previous studies on why sexist and misogynistic views are shaped and sustained in society found frustrated mating needs and sexual entitlement to play important roles, but the established variables social dominance orientation (SDO), right-wing authoritarianism (RWA) and system justification (SJ) were not accounted for. This paper aims to build on previous research by examining novel explanations for the shaping of misogynistic views in society based on the trends, discourse, and characteristics observed within the women-unfriendly communities of Incels. From this group, the factors frustrated mating needs, sexual entitlement, low self-perceived mate value, and feelings of social isolation are hypothesized to predict misogynistic attitudes. An online self-report survey was developed to gather data in a sample of 114 men and women. The results of the multiple regression analyses showed that respondents who have higher feelings of sexual entitlement are more likely to endorse misogyny, above and beyond control variables of social dominance orientation (SDO), right-wing authoritarianism (RWA), and system justification (SJ). The present study contributes to the field of social psychology literature by suggesting a novel, individual-level (other than attitudinal) factor to the explanations of misogynistic attitudes.

In the ever-changing world, and especially with the rise of social media in the last two decades, expressions of misogyny are easily communicated and shared worldwide. Misogyny is the contempt for or hatred towards women and includes practices that are meant to keep women in their place (Kukla, 2020). A common outcome of misogyny is gender-based violence, whether it be vocal, physical, or sexual. Globally, it is estimated that 1 in 3 women have experienced gender-based physical or sexual violence in their lifetime (World Health Organization, 2017). Nowadays, misogyny is also commonly expressed on the internet and social media (Banet-Weiser & Miltner, 2016; Lindsay, 2020). Examples are hostile and aggressive messages, but also insults and portrayals of women as ugly and hysterical (Jaki, et al., 2019). Sometimes messages go further, describing violence and rape fantasies. Women are disproportionately targeted for harassment online, with perpetrators most likely to be men (Jones et al., 2019).

Whether misogyny is expressed offline or online, the consequences are real either way. Biased, sexist, and misogynistic beliefs lead to women feeling unsafe, experiencing less opportunities than their male counterparts, and the continuing existence of the pay-gap (Austin & Jackson, 2019; Scaptura & Boyle, 2019). Furthermore, sexist and misogynistic beliefs can translate into physical violence against women (Scaptura & Boyle, 2019). Between 2014 and 2018 alone, 53 people in the US and Canada fell victim to a rejection-shooting or hate attack directed at women (Thomkinson et al., 2020). Interestingly, some of these mass shooters are known to have participated in online communities where men share sexist ideologies and their contempt toward women. Considering that these communities only lately started to gain attention in the media and literature, not much empirical research exists about them yet (Farrell, 2019). However, exploring what motives drive the men in these extremist communities can be imperative for social psychology literature, because in this way new perspectives for misogynistic violence reduction and social wellbeing interventions can be gathered. Therefore, the current study is interested in exploring possible new explanations for people's endorsement of sexist and misogynistic beliefs which are drawn from the observed characteristics, expressions and motives found in such online environments.

The existing literature on misogyny suggests that hostile attitudes toward women are connected to social dominance orientation (SDO), right-wing authoritarianism (RWA), and system justification (SJ). SDO is the belief that there exists a hierarchy among different groups in society, and people who are more social dominance oriented actually prefer this group-based hierarchy: they are competitive-driven and wish for dominance and superiority over outgroups (Sibley & Duckitt, 2007). SDO is believed to contribute to misogyny because it allows for the

acceptance of inequality between men and women (Austin & Jackson, 2019). Consistent with this suggestion, Austin and Jackson (2019) have shown that both men's and women's hostile sexist attitudes were predicted by SDO.

Next, RWA measures the adherence to and support for authoritative structures and conventional norms and traditions. People scoring high in RWA are shown to display hostility toward individuals who are seen as deviant from oneself or the norm, because they are motivated by a wish for social cohesion (threat-driven) (Sibley & Duckitt, 2007). When translated to a gendered context, RWA individuals prefer the traditional role divide between men and women, where men are more powerful, and women seen as the lesser sex (Sibley & Duckitt, 2007).

Lastly, SJ holds that if people want to see the current social system as fair, they will more easily endorse stereotypes including ones caused by sexism and misogyny to justify the inequality within the system (Austin & Jackson, 2019). Misogyny was found to be endorsed by individuals who try to justify the status quo (Austin & Jackson, 2019).

Because SDO, RWA, and SJ are established factors in the shaping of misogyny, the current study will take these into account. An important critical note, however, is that all three factors are attitude-based. In this novel research it is sought to explore more experience-based factors on the individual level, to see how these factors predict misogyny overall, and when SDO, RWA, and SJ are controlled for.

The Incel Community and Its Misogynistic Ideology

One particular misogynistic community that has lately gained attention due to attacks executed by some of its members, is that of Incels (short for involuntary celibates). Incels are individuals who desire sexual or romantic relationships or wish to have sexual contact but find themselves unable to achieve these wishes (Jaki et al., 2019; Young, 2019). The term was coined in 1997 by a queer woman who wanted to create a support group for those who felt they were unable to find a romantic partner (Beauchamp, 2019; Hoffman et al., 2020); however, today the Incel community exists almost exclusively of heterosexual men sharing misogynistic ideologies and hateful messages. These interactions happen online, as Incels are not known to organize in offline spaces like other hate groups often do (Blommaert, 2017; Williams & Arntfield, 2020).

Interestingly, Incels attribute blame for their celibate state to external factors: because they believe they are denied the sex that is rightfully theirs, Incels turn hateful towards women, and men who they deem sexually successful (Scaptura & Boyle, 2020; Young, 2019). Their

line of reasoning is as follows: women are the reason for their sexual frustration and isolation because today's emancipated women are superficially wired and will always choose the more attractive men ('alpha males'), making it impossible for the self-proclaimed 'lesser' Incel ('beta male') to find a partner (Hoffman et al., 2020). Consequently, women are the main targets of Incels' hostility and anger, and are often depicted as vile, evil creatures who only want to manipulate men (Maxwell et al., 2020). Research has shown that men affiliated with the Incel community are more likely to support assault and violence towards women (Baele et al., 2019; Scaptura, 2019).

Incels have a specific worldview that shapes the way they perceive society, and sexist and misogynistic attitudes are ingrained in this perspective. Particularly, they see society as hierarchized according to one's physical attractiveness (Baele et al., 2019). At the top, Incels describe what they call the "Chads" and the "Stacys": these are the sexually successful people, popular and attractive, rich, and powerful (Jaki et al., 2019). Incels place themselves at the bottom as the beta males, unable to meet masculinity ideals and destined to be alone forever. This hierarchy is based on Incels' constructed understanding of women as superficial and too weak to overcome their biological impulses to date alpha males (Rouda, 2020). Moreover, women are dehumanized as "femoids" (female humanoids; not even real humans) who do not care about personality (Baele et al., 2019). They refer to women having hypergamous tendencies, meaning that they only seek men with the best genes, despite their own looks (Beale et al., 2019). This imbalance in the dating pool caused by women often leads Incels to romanticize past traditional times, where society was family oriented and men could easily gain a relationship through marriage (Hoffman et al., 2020; Thomkinson et al., 2020). Feminism has now robbed men of these standards, and some Incels thus seek to rectify this wrongdoing (Hoffman et al., 2020).

What Psychological Factors Shape Incels' Misogynistic Attitudes?

Alongside the above-described rationale of Incels (e.g., society hierarchized by physical attractiveness), researchers are debating about other underlying reasons for Incels to participate in misogynistic thought and behaviour, and what factors could play a role in holding such ideologies. Keeping in mind the way Incels perceive women and society, we can extract several factors that seem to add to their misogynistic manners.

Firstly, Incels are known to express that all that is left for them is frustration. Previous research has suggested that "frustrated mating needs" may be a contributing factor to Incel's hostile attitudes toward women (Konutgan, 2020). The frustrated mating needs hypothesis can

be explained in the following way: the inability to find a romantic and/or sexual partner results in feelings of not being masculine, which in turn leads to frustration and a loss of control (Konutgan, 2020). For example, Blommaert (2017) described how the Isla Vista shooter expressed feelings of unmet mating needs before his act of violence in 2014, adding this factor to his motives. Consistent with these arguments, these feelings were found to be associated with support for violence and aggressive fantasies (Scaptura, 2019). Furthermore, Konutgan (2020) found a correlation between frustrated mating needs and hostile attitudes toward women, suggesting that this is an important factor for men's acceptance for sexist beliefs. Based on these findings, it is expected that frustrated mating needs should predict misogynistic beliefs.

Another explanation for Incels' sexist and misogynistic views is proposed by the "aggrieved sexual entitlement" hypothesis. According to this hypothesis, not getting the desired sexual or romantic contact that Incels believe women owe them, makes them angry and fuels Incels' misogynistic and revengeful attitudes. In their research, Kalish and Kimmel (2010) explain that "aggrieved sexual entitlement" inspires "revenge against those who have wronged you; it is the compensation against humiliation" (p. 454). According to Blommaert (2017), these unwanted feelings that create a sense of victimhood are then a logical motivation for violent revenge. Aggrieved sexual entitlement plays a role in Incels' sense of masculinity too. The humiliation Incels feel for being celibate is emasculate, according to Kalish and Kimmel (2010): "humiliate someone and you take away his manhood" (p. 454). Therefore, they might feel necessitated to avenge those who hurt them; sexual entitlement is suggested to be a factor in male mass shootings (Kalish & Kimmel, 2010). Due to this information, people who feel sexually entitled are predicted to endorse misogynistic attitudes.

Next to frustrated mating needs and sexual entitlement, another factor that seems to play into Incels' feelings of victimhood is that of their low self-perceived mate value. One's mate value is one's overall attractiveness as a potential partner (Penke & Denissen, 2008). Incels rank themselves as physically unattractive and weak, and these feelings of unattractiveness contribute to Incels' hopelessness about their situation and strengthen their belief that women systemically oppress "ugly" men (Conley, 2020; Scaptura & Boyle, 2019). They are the victims of a world in which alpha males are chosen over them, leaving no women behind (Baele et al., 2019; Blommaert, 2017). According to Baele et al. (2019), Incels acknowledge this as a fact and deem it unchangeable, so they have the nihilistic belief that there is no room for hope. This makes Incels vulnerable to self-harm and to undertake cathartic violence against society and women (Baele et al., 2019). Therefore, low self-perceived mate value is expected to predict misogyny.

Lastly, another factor that may shape Incels' endorsement of sexist and misogynistic attitudes is social isolation: due to Incels' often inadequate social skills they are easily isolated from close attachment, and this can add to anxiety, depression, and feelings of despair (Donnelly et al., 2001; Maxwell et al., 2020). According to research conducted by Scaptura & Boyle (2019), feelings of social exclusion and (chronic) rejection are connected to violent fantasies, including rape fantasies and committing murder. Based on these studies, it is expected that feelings of social isolation predict misogyny.

The Present Research

From the analysis above, it has become clear that the Incel community holds several ideologies that are construed as misogynistic. Moreover, the psychological factors identified above seem to suggest a relation to the likelihood of supporting violence and hostility, especially toward women. Additionally, only one study to date (an unpublished thesis) has examined and found evidence for the relationship between some of the factors mentioned above (frustrated mating needs and sexual entitlement) and misogynistic attitudes, but existing explanations such as SDO, RWA, and SJ were not controlled in that study. It is essential to build upon these recent insights about the roles of these psychological factors in shaping misogynistic views, because this can inform us about potential new interventions to reduce violence against women in society. Furthermore, it informs us about how misogyny develops in our ever-changing online world, which is still relatively uncontrollable and where it is easily possible to engage in online hostility, which in turn has consequences for offline attitudes and violence. Therefore, the psychological factors found in Incel communities "frustrated mating needs", "sexual entitlement", "low self-perceived mate value", and "social isolation" are central to the current study.

It is important to note that rather than focusing exclusively on Incels, the present study will examine these traits within the larger population, because misogyny is found beyond this exclusive community and in this way the constructs can be tested in society as a whole. As Scaptura (2019) has stated, Incels can be considered extremes within the (male) population. Furthermore, several studies have shown that misogyny can also be endorsed by women, for example to reduce the negative affect they experience by being complicit to an inequal social system (Austin & Jackson, 2019). Thus, similar to Konutgan (2020), this study will also examine the proposed psychological factors among both men and women, beyond Incels.

Based on the discussion above, the following hypothesis is suggested: Frustrated mating needs, sexual entitlement, low self-perceived mate value and feelings of social isolation

are all expected to predict the endorsement of misogynistic attitudes. To make the findings of the current study more robust, the currently known influencers of misogyny SDO, RWA, and SJ will be used as control variables.

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Method

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Participants

Initially, 164 participants were recruited for this study, however, due to the exclusion criteria 50 responses were excluded, leaving 114 final respondents between 18 and 65 years old ($M = 24.83$, $SD = 9.96$). Responses were taken out when a participant did not complete the questionnaire or failed more than one attention check added by the researchers. The respondents were recruited via a link to the online questionnaire, which was distributed on social media including WhatsApp and Facebook (N = 42). 72 of the respondents were students from the University of Twente, recruited through the university's test-subject system SONA, where students were granted 0.25 credits for participating in research as a form of compensation. All data has been anonymized to ensure privacy. In Table 1, the demographic characteristics of the final sample are shown.

Table 1
Demographic characteristics of the respondents (N = 114)

		Frequency	Percent
Nationality	Dutch	26	22.8
	German	75	65.8
	Other	13	11.4
Sex	Male	31	27.2
	Female	81	71.1
	Other	2	1.8
Sexuality	Heterosexual	84	73.7
	Homosexual	3	2.6
	Bisexual	24	21.1
	Other	3	2.6
Current relationship status	I'm not dating or in a relationship	47	41.2
	Casually dating	11	9.6
	Exclusively dating	22	19.3

	Living together / engaged / married	34	29.8
Number of relationships	None	8	7.0
	1	32	28.1
	2	26	22.8
	3	19	16.7
	4	8	7.0
	5-6	9	7.9
	7-9	6	5.3
	19	5	4.4
	20+	1	.9
Number of sexual partners	None	13	11.4
	1	23	20.2
	2	16	14.0
	3	12	10.5
	4	10	8.8
	5-6	9	7.9
	7-9	11	9.6
	10-19	15	13.2
	20+	5	4.4
Situation regarding sexual experiences	I am a virgin who has never had sex	12	10.5
	I am a single who had sex in the past but is unable to establish current sexual relationships	31	27.2
	I am currently partnered but in a sexless relationship	6	5.3
	I am voluntarily celibate	6	5.3
	I am not celibate	59	51.8
Incel Identity	Yes	3	2.6
	No	111	97.4

Design and Procedure

The current study used a cross-sectional correlational survey design, implemented in an online self-report questionnaire created in Qualtrics. The Qualtrics survey was active in SONA and social media platforms for one month from the 27th of October until the 27th of November. Prior to starting the survey, participants were shown an informed consent form, which contained information about the focus and procedure of the research, the participants' rights, possible risks, and confidentiality in the research. After agreeing to consent, the participants were shown the demographic questions. Then, the participants completed the four scales measuring the predictor variables, two scales measuring the outcome variable, and three scales measuring the control variables, respectively. The scales within each variable type were randomly presented. Moreover, the items within the scales were randomly displayed to account for order effects. After completing all items, participants were fully debriefed and thanked for participation.

Measures

All survey instructions, scales and items are presented in Appendix A. The following variables were measured as described below.

Demographic variables. First, participants responded to nine demographic questions in the following order: age, gender, nationality, sexual orientation, relationships status, number of relationships and sexual partners, status regarding sexual experiences, and whether they identify as an Incel.

Frustrated mating needs. To measure one's frustrated mating needs, the 10-item Frustrated Mating Needs Scale (Konutgan, 2020) was used. This scale measures participants' level of frustration that results from their unsatisfied sexual and romantic needs. An example of a question focused on sexual needs is "Quite often I would like to have sex, but I cannot", with answer options ranging from 1 = strongly disagree to 7 = strongly agree. An example of an item focusing on romantic needs is "It upsets me that I don't have a romantic partner to spend time with".

An exploratory factor analysis based on principal axis factoring was performed on the 10 items to determine the factors of the underlying concepts. Using extraction method and an oblimin (oblique) rotation, this scale showed a two-factor solution that accounted for 75.04% of the variance (n = 10). Items that loaded on factor 1 related to romantic frustration, while items that loaded on factor 2 related to sexual frustration. An overall frustrated mating needs scale was created from this two-solution scale by averaging the 10 items (α = .92).

Sexual entitlement. Sexual entitlement was measured by six items, which were taken from the five item Sexual Entitlement subscale of the Sexual Narcissism Scale (Widman & McNulty, 2010) which assessed the belief that it is one's personal right to fulfil one's sexual desires (e.g., "I should be permitted to have sex whenever I want it."), and one item ("Everyone is entitled to sex") taken from the Hanson Sex Attitude Questionnaire (Hanson et al., 1994). The items were assessed on a seven-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. Considering that this scale was edited by the researchers, again an exploratory factor analysis was performed. Extraction method and oblimin (oblique) rotation showed that a two-factor solution is appropriate for this scale, accounting for 66.61% of the variance (n = 6). The pattern matrix showed that all items, with the exception of item 5 ("I expect sexual activity if I go out with someone on an expensive date"), loaded on factor 1. Moreover, when taking into account the total variance explained by the factors after extraction, the second factor did not add much: it explained only 7.33% of the total variance. Therefore, item 5 was removed. The remaining five items were averaged to create the scale of "sexual entitlement" (α = .81).

Low self-perceived mate value. Participants' perception of their own mate value was measured by the four-item Mate Value Scale (Edhund & Sagarin, 2014). An example of an item is "Overall, how do you believe you compare to other people in desirability as a partner on the following scale?" with answers ranging from 1 = Very much lower than average to 7 = very much higher than average. The four items were combined into an index of self-perceived mate value by averaging the scores (α = .85).

Feelings of social isolation. The 11 items of the Emotional and Social Loneliness Scale (De Jong-Gierveld, & Van Tilburg, 2010) were used to measure feelings of social isolation using a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree). In this scale, loneliness is defined as "a situation experienced by the participant as one where there is an unpleasant or inadmissible lack of (quality of) certain relationships" (De Jong-Gierveld, & Van Tilburg, 1999, Development of the scale, para. 4), and this definition fitted the psychological construct taken from the experiences of Incels the best; therefore, these items were used. Five of the items were positively formulated (e.g., "There is always someone I can talk to about my day-to-day problems") while the other six items were negatively formulated (e.g., "I experience a general sense of emptiness"). The positively phrased items were reverse coded before creating the scale by averaging the scores (α = .87).

Misogynistic attitudes. Two different scales were used to get the most holistic representation of misogyny. First, the Revised Hostility Toward Women Scale (Lonsway & Fitzgerald, 1995) was used, which contained ten items measuring the respondents' negative

perceptions of women in a more general sense on a seven-point Likert scale (e.g., "I am easily angered by (other) women"; 1 = strongly disagree, 7 = strongly agree). A composite scale was created from the mean of the items combined, labelled "general misogyny" for the purpose of this study (α = .80).

In addition to this scale, the short six-item Hostile Sexism subscale of the Ambivalent Sexism Inventory (Rolero et al., 2014) was used (e.g., "women seek to gain power by getting control over men"), again with a seven-point Likert scale. This scale differed slightly from the HTWS, as its items were more oriented towards negative attitudes towards career-oriented women and feminists. Therefore, a composite scale was created from the mean of all the items combined called "feminist-oriented misogyny" (α = .82). Both scales were analysed to get the results for the construct misogyny.

Control variables: Social dominance orientation (SDO), right-wing authoritarianism (RWA) and system justification (SJ). The control variables SDO, RWA, and SJ were assessed with three short scales to make sure the questionnaire would not be too tedious for the participants. To measure SDO, the short four-item SDO Scale by Pratto et al. (2013) was used, which has a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree) (α = .70). An example item is "In setting priorities, we must consider all groups". For RWA, the Very Short Authoritarianism Scale was utilised (Bizumic & Duckitt, 2018) (α = .57). This scale contains six items, of which three are reversed items. An example is "It's great that many young people today are prepared to defy authority" (reversed item). Lastly, to measure SJ, a short System Justification Scale developed by Jost and Kay (2003) was used. This scale consisted of eight items measuring gender-related system justification on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree) (α = .75). For these three scales, items were averaged to create composite scales.

Analysis

All collected data were transferred from Qualtrics into SPSS (24th edition). Before any analyses were carried out, the data were prepared to ensure smooth assessment: any relabelling of the scales was done, items were reverse-coded, and responses that were insufficient to continue for analysis were excluded. Next, an overview of the characteristics of the sample was drawn by applying a descriptive analysis to the dataset. Then, the psychometric properties of the survey were investigated: reliability analyses were conducted to compute cronbach's alpha for each relevant construct. Also, factor analyses were carried out on the Frustrated mating needs scale and the Sexual entitlement scale, since these scales were not established in prior

research.

To test the hypothesis that frustrated mating needs, sexual entitlement, low self-perceived mate value and feelings of social isolation predict misogynistic attitudes, first a Pearson correlation analysis was applied to retrieve information about the correlation between these variables (frustrated mating needs, sexual entitlement, self-perceived mate value, feelings of social isolation, variables measuring misogynistic attitudes, as well as the control variables). Then, a hierarchical multiple regression analysis was conducted in which misogynistic attitudes (hostile attitudes toward women and hostile sexism) were regressed on the predictor variables: in step one the control variables were added (SDO, RWA, and SJ), and in step two the main predictors for the current hypothesis were included (frustrated mating needs, sexual entitlement, self-perceived mate value, and feelings of social isolation). The results were also examined only among the sample who had characteristics representative of Incels (N = 49), but the results did not differ in this sample in comparison with the whole sample. Therefore, only the results of the full sample were written. A significance level of .05 was chosen to be needed in order to be considered significant.

Results

Descriptive statistics

For the variables misogyny, frustrated mating needs, sexual entitlement, social isolation, self-perceived mate value, SDO, RWA, and SJ, all scales were averaged, and the means and standard deviations were calculated (see Table 2).

Table 2
Descriptive statistics

	Mean	Std. Deviation
General Misogyny	2.57	.82
Feminist-oriented Misogyny	2.60	1.08
Frustrated Mating Needs	2.92	1.41
Sexual Entitlement	3.12	1.28
Social Isolation	3.04	1.06
Self-Perceived Mate Value	4.88	.91
SDO	1.85	.94
RWA	2.66	.79
SJ	3.30	.98

Note. All scales were measured on a 7-point Likert scale.

Correlational analysis

Sexual entitlement was significantly related to general misogyny and feminist-oriented misogyny, but no other hypothesised variables correlated with misogyny. Furthermore, misogyny was significantly correlated to the control variables SDO, RWA, and SJ (see Table 3 for a full overview of the correlation coefficients and significance levels).

Table 3
Correlations

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. General Misogyny	1								
2. Feminist-oriented Misogyny	**.64****	1							
3. Frustrated Mating Needs	.01	.05	1						
4. Sexual Entitlement	**.41****	**.33****	.17	1					
5. Social Isolation	.05	-.01	**.37****	-.03	1				
6. Self-Perceived Mate Value	.03	.10	**-.26****	.15	**-.34****	1			
7. SDO	**.25****	**.44****	-.12	.04	-.15	.03	1		
8. RWA	**.39****	**.42****	-.09	.12	-.05	-.07	**.25****	1	
9. SJ	**.25****	**.44****	.02	.03	-.02	-.08	**.44****	**.34****	1

**. Correlation is significant at the 0.01 level (2-tailed).

Regression analysis

The results of the hierarchical multiple regression analysis for the general misogyny scale showed that model 1 with SDO, RWA, and SJ together significantly contributed to the model (see Table 4). When the predictor's contribution was examined separately, only RWA was a significant predictor of general misogyny. In addition, frustrated mating needs, sexual entitlement, social isolation, self-perceived mate value, SDO, RWA, and SJ together significantly contributed to general misogyny in model 2. Beyond RWA, only sexual entitlement significantly predicted general misogynistic attitudes; all other hypothesized predictors (frustrated mating needs, social isolation, low self-perceived mate value) did not. Indeed, as can be seen in Table 4, frustrated mating needs had a very weak negative relationship with general misogyny, and social isolation and low self-perceived mate value had relatively weak positive relationships with general misogyny.

For the hierarchical regression for feminist-oriented misogyny, the results indicated that model 1 with SDO, RWA, and SJ was significant, with all three independent variables significantly contributing to the model (see Table 5 for an overview). Model 2 was significant

as well, with only sexual entitlement significantly predicting misogyny above and beyond SDO, RWA and SJ. Taken together, the hypothesis is only partially supported by these results: only sexual entitlement is predicted to drive misogynistic attitudes, above and beyond SDO, RWA and SJ.

Table 4

Regression analysis summaries for General Misogyny

Model		B	Std. Error	Beta	t	*p*
1	SDO	.11	.08	.12	1.28	.205
	RWA	.34	.10	.33	3.51	**.001**
	SJ	.08	.08	.09	.91	.364
2	SDO	.11	.08	.13	1.43	.156
	RWA	.29	.09	.28	3.18	**.002**
	SJ	.08	.08	.10	1.08	.282
	Frustrated Mating Needs	-.04	.05	-.06	-.68	.497
	Sexual Entitlement	.25	.05	.38	4.56	**.000**
	Social Isolation	.10	.07	.13	1.43	.155
	Self-Perceived Mate Value	.02	.08	.02	.23	.820

a. Dependent Variable: General Misogyny

Note: Model 1 significance: $F(3, 109) = 7.999$, p < **.001**, $R^2 = .180$

Note: Model 2 significance: $F(7, 105) = 7.405$, p < **.001**, $R^2 = .331$

Table 5

Regression analysis summaries for Feminist-Oriented Misogyny

Model		B	Std. Error	Beta	t	*p*
1	SDO	.32	.10	.28	3.17	**.002**
	RWA	.37	.11	.28	3.30	**.001**
	SJ	.24	.10	.22	2.44	**.016**
2	SDO	.33	.10	.29	3.41	**.001**
	RWA	.35	.11	.26	3.25	**.002**
	SJ	.25	.10	.22	2.60	**.011**
	Frustrated Mating Needs	.06	.06	.07	.87	.389
	Sexual Entitlement	.21	.07	.24	3.22	**.002**
	Social Isolation	.07	.09	.07	.85	.398
	Self-Perceived Mate Value	.15	.10	.13	1.56	.123

a. Dependent Variable: Feminist-Oriented Misogyny

Note: Model 1 significance: $F_{(3, 109)} = 18.298$, $p < .001$, $R^2 = .317$

Note: Model 2 significance: $F_{(7, 105)} = 11.345$, $p < .001$, $R^2 = .431$

Discussion

The current study sought to investigate the roles of frustrated mating needs, sexual entitlement, low self-perceived mate value, and feelings of social isolation on the shaping of misogynistic views in society. Although these psychological factors were extracted from Incel communities, they were mostly measured in respondents outside of this community (non-Incels), as the research wished to explore if these factors also held in a larger population. Results from the regression analyses confirmed one part of the hypothesis, namely that sexual entitlement is a robust predictor of misogynistic attitudes, above and beyond established attitudinal factors (SDO, RWA, and SJ). Inconsistent with the hypothesis, frustrated mating needs, low self-perceived mate value, and feelings of social isolation played no role in shaping misogyny in the study sample.

Theoretical and Practical Implications

The findings of the current study were only partially consistent with previous research. Specifically, people who feel more entitled to sexual or romantic contact are more likely to hold misogynistic views, which is in line with research conducted by Grubbs, Exline, and Twenge (2014). In their study based on a previously established link between narcissism (of which entitlement is a part) and sexism in men, they also found that entitlement was a robust predictor of hostile sexism (Grubbs et al., 2014). Thus, our findings give additional support for the suggestion that entitlement plays a role in the shaping of misogynistic attitudes in society.

What makes this an important addition to the field of research is that sexual entitlement is an individual-level psychological factor (similar to personality traits) instead of attitudinal factors such as SDO, RWA, or SJ. Attitudinal scales are very similar to the outcome variable, misogyny, since this is also measured on an attitudinal scale. The experiential factors (frustrated mating needs, sexual entitlement, self-perceived mate value, and social isolation) are based in feelings, and thus measure from a different base, adding to the value of the correlation. This novelty contributes to the field of research despite the only partially confirmed hypothesis. Therefore, it is a novel factor that should be tested further to develop a better understanding of misogynistic attitudes in society.

Especially surprising was that frustrated mating needs did not contribute to misogynistic attitudes, considering that this link has been found before in previous research. Indeed, Konutgan (2020) found frustrated mating needs to be a significant predictor of misogyny. A possible explanation for the difference in results might be that Konutgan (2020) had a larger set of Incels in her sample (N = 28) than the current study (N = 3). These self-proclaimed Incels may have caused a stronger effect on the scale than the non-Incel sample. Moreover, in the present sample the scores on misogynistic attitudes were lower compared to Konutgan's (2020) study. Measuring the links to misogyny could have been more fruitful if the sample consisted of respondents with stronger misogynistic attitudes. This is in line with the work of Grunau (2020), who showed a higher mean score on misogyny for Incel respondents than for non-Incel respondents, with a significant difference between the two groups. Future research should focus on a sample that integrates a higher number of Incels or people who are involuntarily celibate to investigate if these factors are indeed mainly prominent in Incel communities or involuntarily celibate individuals.

Low self-perceived mate value barely showed a relation to misogynistic attitudes in the current sample. A possible explanation for this is that self-perceived mate value might only have an indirect effect on misogyny via increasing other variables. As was written before, low self-perceived mate value caused Incels to feel hopeless, and this feeling, in turn, added to their violence against women (Baele et al., 2019; Scaptura & Boyle, 2019). Thus, it might be more interesting for future researchers to examine the indirect effect of low self-perceived mate value on misogyny via other factors such as hopelessness, negative moods, and social isolation.

Feelings of social isolation did not seem to play a role in forming misogynistic attitudes. These results contrasted what Scaptura and Boyle (2019) found, namely that social isolation was a factor that contributed to opposition towards women. A possible explanation for these differences in results is that Scaptura and Boyle (2019) may have measured a different construct, one which they label social exclusion/rejection: there might be a fundamental difference in how these scales were created in comparison to the social isolation scale used in the current research. Indeed, the trait social exclusion/rejection by Scaptura and Boyle (2019) was created by asking about weakness, rejection, defeat, and shunning. In contrast, the items used in the present study had a more passive take on isolation, asking to agree/disagree with statements such as "I miss having a really close friend". Future research should focus on examining the most fruitful way to measure social isolation in order to further explore this construct in regard to misogynistic attitudes. Another note worth mentioning is that the responses to the social isolation scale might have been influenced due to recent situational

events: since the uprise of the global pandemic caused by Covid-19 this year, a lot of people are feeling more isolated because of safety restrictions. Therefore, there exists a possibility that the answers for this scale were influenced by these safety measures, as people are feeling more isolated on the whole.

Strengths & Limitations

There were several strengths and weaknesses in this study that deserve mentioning. Firstly, a major strength of the present research was that the hypothesized constructs were analysed while accounting for control variables. By including the existing explanations into the model, this allowed for a more robust way to test the new hypotheses, and it thus contributed to the work already done in this field. Indeed, previous research on frustrated mating needs and entitlement showed a relation between these two factors and misogynistic attitudes, but the current research now also showed that this relationship existed for sexual entitlement above and beyond established factors (SDO, RWA, and SJ).

Another strength is that this study found high psychometric properties on the not yet established frustrating mating needs scale, adding to its validity. Because the current study showed good results, the scale gained more trustworthiness for forthcoming research. The frustrated mating needs scale had two factors, sexual romantic needs, which can be considered separately as well as together in future research. The sex and frustrated factors were sufficient.

A great limitation to this study was the small proportion of men participating. 71% of the sample consisted of women, while literature suggests that most hatred towards women is endorsed and executed by men (Jones et al., 2019). Women can still hold misogynistic attitudes, but it has been found that this attitude differs from men: Grubbs et al. (2019) found a difference in results on benevolent or hostile sexism in men and women. Moreover, studies on Incels suggest that the majority of the current Incel community exists of heterosexual men. Therefore, future research should strive to examine factors linked to misogyny within a male-dominated sample to see if this supports existing literature.

Another limitation is that our results showed little variance due to the low means on the misogyny and frustrated mating needs scales. Therefore, inferences about the relation between frustrated mating needs and misogyny were difficult to make. As stated before, Konutgan (2020) did find a positive correlation between frustrated mating needs and misogyny while using the same scale. Future research should focus on extending this research to understand the differences between the two studies, and to see if frustrated mating needs might play a role when more variance exists in the sample results.

Lastly, the cross-sectional, self-report design of the present work comes with two other limitations. Because this is a cross-sectional study, no conclusions about causality can be made. Although it can be inferred that a relatively stable characteristic such as entitlement should precede the development of a misogynistic attitude, this cannot be stated instantly. Thus, it is of importance that future studies examine the causality of the relationship between entitlement and misogyny through means of longitudinal research or experiments. Furthermore, self-report questionnaires limit conclusions about behaviour, and therefore future researchers should also investigate direct relations between sexual entitlement and misogynistic behaviours.

Conclusion

This study broadens the existing literature on misogynistic attitudes by showing that sexual entitlement is an important psychological factor when it comes to shaping misogynistic beliefs, above and beyond the predominant explanations based on preferences for group hierarchy, preferences for justifying the system, and right-wing political attitudes. Moreover, it also made apparent which psychological factors are still in need of further research and contributed to further empirical evidence of the psychometric properties of the frustrated mating needs scale. Taken together, these findings add to social psychology literature regarding hatred towards women, which can help interventions aimed at reducing misogynistic violence in society and strengthen social wellbeing on the whole.

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Appendix A: The developed online questionnaire

Welcome to this study!

Thank you for your interest in our research. In the following, you will be informed about the focus of this research, the method and the data management.

Focus of this research

This study is designed to examine psychological processes underlying attitudes and preferences about the position of women and men in our society. You are being asked to participate in this study because we are interested in these processes in a wide variety of people.

Procedure of this research

The research consists of a questionnaire, which roughly takes 20 minutes to complete. Participating is entirely voluntary, you can skip any questions that you don´t want to answer or withdraw from the survey at any time without giving a reason.

Information and Data Management

Your data is handled with utmost confidentiality. Personal or confidential data is not issued forth in such a manner that it could be traced back to you.

Risks and Voluntariness

Partaking in this research does not elicit any foreseeable physical, legal or economic risks. You are not obligated to answer any questions that cause distress or discomfort. Partaking in this research can be terminated for any reason at any moment. Presuming that you terminate this research, all your data will be fully deleted and omitted from the research results.

Questions or remarks regarding this research can be emailed directly to Ming Morssinkhof (m.o.morssinkhof@student.utwente.nl) or Allanah Hansmeyer (a.e.hansmeyer@student.utwente.nl). Objections or concerns about the setup or method of this research can instead be emailed to the secretary of the Behavioural Management and Social Sciences Ethics Committee of the University of Twente (ethicscommittee-bms@utwente.nl).

Kind regards,

Allanah Hansmeyer and Ming Morssinkhof

Faculty of Behavioural, Management, and Social Sciences

In order to continue with this survey, you have to agree with the aforementioned information and consent to participate in the study.

- I consent to taking part in this study
- I do not consent to taking part in this study

First, we ask you to describe your background (age, sex, relationship status, etc.) as part of demographic information

How old are you?

- *participant enters age*

What is your nationality?

- Dutch
- German
- Other, namely: *participant enters*

What is your sex?

- Male
- Female
- Other/ prefer not to say

Which of the following best describes your sexual orientation?

- Heterosexual
- Homosexual
- Bisexual
- Asexual
- Prefer not to say

What describes your current relationship status best?

- I´m not dating or in a relationship
- Casually dating
- Exclusively dating
- Living together/ engaged/ married

Throughout your life, how many girlfriends/ boyfriends have you had?

- None
- 1
- 2
- 3
- 4
- 5-6

- 7-9
- 10-19
- 20+

Throughout your life, how many sexual partners have you had?

- None
- 1
- 2
- 3
- 4
- 5-6
- 7-9
- 10-19
- 20+

Which of the following best represents your situation regarding sexual relationships/ experiences?

- I am a virgin who has never had sex.
- I am a single who had sex in the past but is unable to establish current sexual relationships.
- I am currently partnered but in a sexless relationship.
- I am voluntarily celibate.
- I am not celibate.

Sometimes, people who have no romantic or sexual partners, despite desiring to have one, define themselves as "Incels". Incels have been known to communicate on Internet sites and platforms such as Reddit and facebook groups.

Do you identify as an Incel?

- Yes
- No

Attention!

There are attention check questions in this survey. They are there to ensure that participants read the information carefully and provide quality data. If you are paying attention to the questions and instructions, it is very easy to pass these checks.

Please move to the next page for more questions!

The following questions concern your preferences in close contact with others.

Please indicate to what extent you agree or disagree with the following statements. (Here, a 7- point Likert scale was used. 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither agree nor disagree, 5 = Slightly agree, 6 = agree, 7 = Strongly agree)

- I am often sexually frustrated
- Quite often I would like to have sex, but I cannot.
- I am often sexually aroused, but there is no one to have sex with.
- I don't have sex as often as I would like to.
- I am often frustrated about not being able to find someone to have sex with.
- I am single more than I want to be.
- It upsets me that I don't have a romantic partner to spend time with.
- I am often frustrated about not being able to find a romantic partner.
- I am often upset about not being able to attract a mate.
- It frustrates me that I cannot easily find a person to date.
- If you are reading this, please select "Slightly agree".

The following questions are about your social relationships.

Please indicate the extent to which you agree or disagree with each of the statements below. (Here, a 7- point Likert scale was used. 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither agree nor disagree, 5 = Slightly agree, 6 = agree, 7 = Strongly agree)

- There is always someone I can talk to about my day to day problems.
- I miss having a really close friend.
- I experience a general sense of emptiness.
- There are plenty of people I can rely on when I have problems.
- I miss the pleasure of the company of others.
- I find my circle of friends and acquaintances too limited.
- There are many people I can trust completely.
- There are enough people I feel close to.
- I miss having people around.
- I often feel rejected.
- I can call on my friends whenever I need them.

The following questions are about how you perceive yourself as a partner.

Please answer the questions using the answer options presented below. (Here, a 7-point Likert scale was used. 1 = Extremely undesirable, 2 = Undesirable, 3 = Somewhat desirable, 4 = Average, 5 = Somewhat desirable, 6 = Desirable, 7 = Extremely desirable)

- Overall, how would you rate your level of desirability as a partner on the following scale?
- Overall, how would members of the opposite sex rate you level of desirability as a partner on the following scale?

(Here, a 7-point Likert scale was used. 1 = Very much lower than average, 2 = Lower than average, 3 = Slightly lower than average, 4 = Average, 5 = Slightly higher than average, 6 = Higher than average, 7 = Very much higher than average)

- Overall, how do you believe you compare to other people in desirability as a partner on the following scale?

(Lastly, a 7-point Likert scale was used. 1 = Very bad catch, 2 = Bad catch, 3 = Somewhat of a bad catch, 4 = Average catch, 5 = Somewhat of a good catch, 6 = Good catch, 7 = Very good catch)

- Overall, how good of a catch are you?

The following questions are about how you perceive sex.

Please indicate to what extent you agree or disagree with the following statements.

(Here, a 7- point Likert scale was used. 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither agree nor disagree, 5 = Slightly agree, 6 = agree, 7 = Strongly agree)

- I feel I deserve sexual activity when I am in the mood for it.
- I am entitled to sex on a regular basis.
- I should be permitted to have sex whenever I want it.
- I would be irritated if a dating partner said no to sex.
- I expect sexual activity if I go out with someone on an expensive date.
- Everyone is entitled to sex.

The following questions are about your attitudes and perception of women.

Please indicate to what extent you agree or disagree with the following statements.

(Here, a 7- point Likert scale was used. 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither agree nor disagree, 5 = Slightly agree, 6 = agree, 7 = Strongly agree)

- I feel that many times women flirt with men just to tease them or hurt them.
- I believe that most women tell the truth.

- I usually find myself agreeing with (other) women.

- I think that most women would lie just to go ahead

- Generally, it is safer not to trust women.

- When it really comes down to it, a lot of women are deceitful.

- I am easily angered by (other) women.

- I am sure I get a raw deal from the (other) women in my life.

- Sometimes (other) women bother me by just being around.

- (Other) women are responsible for most of my troubles.

Please indicate the extent to which you agree or disagree with the following statements. (Here, a 7- point Likert scale was used. 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither agree nor disagree, 5 = Slightly agree, 6 = agree, 7 = Strongly agree)

- Many women have a quality of purity that few men possess.

- Women should be cherished and protected by men.

- Women seek to gain power by getting control over men.

- Every man ought to have a woman whom he adores.

- Men are incomplete without women.

- Women exaggerate problems they have at work.

- Once a woman gets a man to commit to her, she usually tries to put him on a tight leash.

- When women lose to men in a fair competition, they typically complain about being discriminated against.

- Many women get a kick out of teasing men by seeming sexually available and then refusing male advances.

- Women, compared to men, tend to have a superior moral sensibility.

- Men should be willing to sacrifice their own wellbeing in order to provide financially for the women in their lives.

- Feminists are making unreasonable demands of men.

- If you are reading this, please select "Agree" to show that you are paying attention.

Lastly, we present questions concerned with your attitudes about society.

Please indicate how much you agree or disagree with each idea below.

Note: "Groups" here refer to different groups in society (e.g., gender, national, ethnic, racial, cultural).

You can work quickly; your first feeling is generally best. (Here, a 7- point Likert scale was used. 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither agree nor disagree, 5 = Slightly agree, 6 = agree, 7 = Strongly agree)

- In setting priorities, we must consider all groups.
- We should NOT push for equality between groups.
- Group equality should be our ideal.
- Superior groups should dominate inferior groups.
- This is an attention check, please select three if you are reading this question.

Please indicate the extent to which you agree or disagree with the following statements. (Here, a 7- point Likert scale was used. 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither agree nor disagree, 5 = Slightly agree, 6 = agree, 7 = Strongly agree)

- It's great that many young people today are prepared to defy authority.
- What our country needs most is discipline, with everyone following our leaders in unity.
- God´s laws about abortion, pornography, and marriage must be strictly followed before it is too late.
- There is nothing wrong with premarital sexual intercourse.
- Our society does NOT need a tougher government and stricter laws.
- The facts on crime and the recent public disorders show we have to crack down harder on troublemakers, if we are going to preserve law and order.

Please indicate the extent to which you agree or disagree with the following statements. (Here, a 7- point Likert scale was used. 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither agree nor disagree, 5 = Slightly agree, 6 = agree, 7 = Strongly agree)

- In general, relations between men and women are fair.
- The division of labor in families generally operates as it should.
- Gender roles need to be radically restructured.
- For women, the United States is the best country in the world to live in.
- Most policies relating to gender and the sexual division of labor serve the greater good.
- Everyone (male or female) has a fair shot at wealth and happiness.
- Sexism in society is getting worse every year.
- Society is set up so that men and women usually get what they deserve.

Debriefing

Thank you very much for participating in our study!

Information about the Study

The term Incels, or involuntary celibates, refers to an online community of men who believe that they are inherently unable to engage in (sexual) relationships with women, despite wanting to do so. Incels blame women for their celibacy, stemming from their belief that they are denied the right to have sex by women who choose alpha males over them.

From studying the Incel community, several psychological factors have been extracted that might function as novel drivers for misogynistic attitudes within our society. Therefore, the primary goal of the current study is to test the prediction that factors such as frustrated mating needs, social exclusion or entitlement predict misogynistic attitudes. Existing literature already has shown that social dominance orientation (SDO), right-wing authoritarianism (RWA) and system justification theory (SJ) are predictors for misogyny, and therefore we have added these as control variables to make our findings more robust. In addition to the abovementioned variables, we will explore the effects of participant gender and age. Altogether, the findings of this study can provide new insight into what shapes misogynistic views in society.

We thank you for your help and the decision to participate in our study. If you know of any friends or acquaintances that are eligible to participate in this study, we request that you do not discuss it with them until after they have had the opportunity to participate. Prior knowledge of questions asked during the study can invalidate the results. We greatly appreciate your cooperation.

For further information about this study, you may contact a.e.hansmeyer@student.utwente.nl and m.o.morssinkhof@student.utwente.nl **,** the persons in charge of this research study.

If you have any questions about the rights of research participants, please contact the Ethical Review Committee of the Behavioral and Management Sciences Faculty, University of Twente, Netherlands, **ethicscommittee-bms@utwente.nl**.

If you are feeling distressed and are unable to contact a person associated with this study, please contact the **Counseling center at the University of Twente at +31 53 489 2035**.

Thanks again for your participation.