



BACHELOR THESIS

Novel Explanations for Misogynistic Attitudes in Society

Social Loneliness as a Moderator in Misogyny

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Table of Contents

Abstract	3
1. Introduction	4
2. Methods.....	8
2.1 Participants.....	8
2.2 Design and Procedure	10
2.3 Materials.....	11
2.4 Data Analysis.....	10
3. Results.....	14
3.1 Descriptive Statistics.....	13
3.2 Correlational Analysis.....	15
3.3 Regression Analyses.....	15
3.4 Moderation Analyses.....	8
4. Discussion.....	20
4.1 Theoretical and Societal Implications	20
4.2 Strengths, Limitations and Recommendations for Future Research	22
5. Conclusion.....	23
References	25
Appendix A – Full Questionnaire	28

Abstract

Previous research was able to identify three attitudinal explanations for misogyny: the preference for social dominance (SDO), right-wing authoritarianism (RWA) and the preference for social justification (SJ). But what other factors influence misogynistic attitudes in society? And can benevolent and hostile sexism truly be distinguished? One study investigated the role frustrated mating needs take when it comes to hatred against women and found a correlation between the two. Although this is an important finding, the previously established explanations of misogynistic attitudes (SDO, RWA and SJ) were not controlled for, which might have affected the outcome of that correlation. The present study (N=114) examined frustrated mating needs and feelings of social isolation to shed light on whether these individual-level experiences influence the development of misogyny – all whilst controlling for SDO, RWA and SJ. To distinguish benevolent and hostile sexism more clearly, the influence of frustrated mating needs on benevolent sexism was also explored. To do so, Data were collected through a self-report questionnaire. Correlational and hierarchical regression results revealed that the assumption that frustrated mating needs predict hostile misogyny could not be supported. Nevertheless, as hypothesized, it also does not predict benevolent sexism. Lastly, this study explored the possibility of feelings of social isolation moderating the effect of frustrated mating needs on misogyny. A moderation analysis resulted in non-significant models, opposing the idea of feelings of social isolation as a moderator. Despite the non-significant results, the present study contributes to the field of social psychology and specifically misogyny by development of novel hypotheses to individual-level psychological factors as possible explanations for the origins and sustainment of misogynistic views in society.

Keywords: Misogyny, Involuntary Celibacy, Frustrated Mating Needs, Social Loneliness, Hostile Sexism, Benevolent Sexism

The fight for gender equality has come a long way, but misogyny still exists in many women's lives. Misogyny is a set of practices that enforce patriarchy, meant to keep women in their place (Kukla, 2020). With the internet offering all kinds of communities to communicate one's views on, misogyny is now being expressed online as well (Banet-Weiser & Miltner, 2016; Lindsay, 2020). Here, anonymity creates space for misogynistic harassment to be freely expressed without consequences (Young, 2019). Examples of such harassment are hostile and aggressive messages, insults and depictions of women as inferior, hysterical and ugly (Jaki et al., 2019). Some radical misogynists go even further and write about holding violence and rape fantasies (Jaki et al., 2019). Notably, women are targeted disproportionately more when it comes to online harassment, with the perpetrators mostly being men (Jones et al., 2019).

Interestingly, misogyny works differently than other forms of prejudice (i.e. racism), which usually involve social distance and unfamiliarity (Austin & Jackson, 2019). To explain misogyny, Glick and Fiske (1996) suggested the ambivalent sexism theory, in which a distinction between two separate but related constructs is drawn: benevolent and hostile sexism. Whilst benevolent sexism is a form of prejudice that is characterized by its subtlety and the view of women as fragile beings that need to be loved and protected, hostile misogyny is more overt and direct as it seeks to hold back women from gaining power and social status through the opinion of women being inferior to men (Mosso et al., 2013). Glick and Fiske (2001) found that the two sexism subscales positively correlated and were able to predict common gender stereotypes, old-fashioned and modern forms of misogyny. According to their theory, ambivalence coins the attitudes towards women nowadays: both highly praising and unfavourable attributes are included in female stereotypes with the aim of maintaining inequality between men and women (Glick & Fiske, 1996).

The nature of misogyny often makes it seem as if men are the only ones holding hostile misogynistic views. Nevertheless, women also endorse them (Ruthig et al., 2017). Different attitudinal factors as explanations for misogyny prevail for both genders. It is suggested that mainly two factors predict the individual differences in men's endorsement of misogyny: Social Dominance Orientation (SDO) and Right-Wing Authoritarianism (RWA; Sibley et al., 2007). The SDO is a competitively driven motivation for intergroup dominance. It is the belief that there is a hierarchy apparent in society, and individuals that are high in SDO actually prefer this hierarchy. As it allows people to accept the inequality between groups, including between men and women, researchers believe SDO to contribute to hostile misogyny (Austin & Jackson, 2019). RWA, consisting of conventionalism, authoritarian submission and authoritarian aggression (Akrami et al., 2011) refers to a threat-driven security-cohesion motivation and

predicts benevolent sexism (Sibley et al., 2007).

Looking at sexism in women, there is a difference in the way women act out misogyny in comparison to men: According to Grubbs et al. (2019), women are more likely to endorse benevolent sexism. One theory that has been suggested to explain this is the system justification theory, which holds that prejudice can evolve through a motivation to justify the status quo (Austin & Jackson, 2019). By adjusting their cognitive state, individuals achieve a distorted image of reality, in which the world seems fair. System justification therefore has a palliative function that makes women feel better about their current political, social and economic situation without them aiming to make changes that will actually help the amount of fairness and equality (Mosso et al., 2013). Even though some psychologists claim these constructs to be correlated with core personality factors and facets, many remain sceptical and rather define SDO and RWA as reflections of social attitudes (Akrami et al., 2011)

Based on the recent development of online communities that are characterised to have misogynistic attitudes, this research proposes alternative explanations for misogyny based on individual-level psychological mechanisms in addition to the existing attitudinal explanations following. Specifically, it investigates how the individual level experience of frustrated mating needs and the feeling of social isolation shape men's endorsement of misogynistic beliefs. The next sections will substantiate the hypotheses by describing the characteristics, discourse and ideologies of a particular online misogynistic community that have recently been established and been growing.

The Incel Community and Its Misogynistic Ideology

Because of the violent misogynistic crimes committed in its name, the online community of Incels drew a lot of attention on itself over the past seven years. Incels, short for involuntary celibates, are members of a small online community of heterosexual men who have not had sexual or romantic relationships with women ever or for a long time because they are unable to find sexual partners (Young, 2019). Coined in 1997 by a queer woman, the term Incel was supposed to describe people who were unable to find a romantic partner, supporting each other online (Young, 2019). The direction the website she created to do so ("Alana's Involuntary Celibacy Project"; Jensen, 2020) took over the next 20 years is far from what it was intended to do though: Nowadays, the community of Incels consists of men only, expressing extremely misogynist views (Høiland, 2019).

According to a study on Inceldom, addressed by Williams and Arntfield (2020), there are three types of Incels, distinguished by their different relationship status. *Virgin* incels are

mostly younger than the other Incel groups. They oftentimes lack social interaction skills and have therefore never or rarely had any contact with women. *Single* Incels, the second group, also lack proper relationship experience over their lifetime whilst *partnered* Incels did have experience with relationships or partnerships, but lacked sexual activity with these relationships. Despite these different categories of Incels, a shared characteristic of all Incels is that they blame women for their sexual difficulties, labelling them as ruthless and shallow (Høiland, 2019).

Moreover, Incels hierarchize society according to one's physical attractiveness (Baele et al., 2019). For the top of this hierarchy, Incels have coined specific characters to symbolize archetypical alpha males and physically attractive women, the so-called "Chads" and "Stacys" (Høiland, 2019). By doing so they ironically disregard any individuality and simply characterize "Stacys" as generally vain, arrogant and entitled (Høiland, 2019). "Stacys" choose "Chads" over Incels, the beta males, because of the sexual revolution that has taken place over the last decades (Hoffman et al., 2020). Moreover, the term "femoids" (female humanoids) is used by Incels as well – dehumanizing women without acknowledging the existence of personality (Baele et al., 2019).

Incels believe that feminism, the contraceptive pill and especially women's involvement in politics are to be blamed for the sexual freedom women enjoy (Hoffman et al., 2020) and the resulting deprivation of sexual experiences that less desirable men are faced with (Williams & Arntfield, 2020). The ideology of Incels even leads some of the more extremist members to seek revenge by advocating violence against women, instigating a social and sexual revolution (Tomkinson et al., 2020). Although Incels have been responsible for seven deadly attacks since 2014, it is a noticeably small number of them that act on their aggression towards women, with the majority of Incels endorsing the groups' ideologies behind closed doors, solely online (Blommaert, 2017). But what characterizes these men to retreat to an online community to advocate for the hatred against women?

What Psychological Factors drive Incels' Misogynistic attitudes?

To be able to combat the issue of misogyny in society, researchers have been aiming to find further underlying reasons for Incels to endorse misogynistic attitude. Next to the before-mentioned attitudinal explanations for this (SDO, RWA and SJ), it is suggested that the individual-level experience of "frustrated mating needs" may be contributing to Incel's hostile misogyny (Konutgan, 2020). As frustration, dissatisfaction or anger stemming from the lack of sexual relationships and the unsuccessful search for a partner are often mentioned by Incels

(Donnelly et al., 2001), the frustrated mating needs hypothesis takes exactly this into account when explaining the development of misogyny: due to the inability to establish a romantic and/or sexual relationship to a woman, feelings of not being masculine enough arise and result in frustration and a loss of control (Konutgan, 2020). Scaptura (2019) even found these feelings to be correlated with the support for aggressive fantasies and violence. A recent study by Konutgan (2020) took the initiative and investigated whether frustrated mating needs predicting hostile attitudes towards women. She indeed found a correlation between the two, suggesting that this could be a relevant psychological factor in driving men to endorse misogyny.

Another factor that may have an influence on the endorsement of misogynistic attitudes is social isolation. As Incels are often challenged with inadequate social skills, issues through isolation can arise more easily and add to feelings of despair, depression and anxiety (Donnelly et al., 2001; Maxwell et al., 2020). A vicious cycle, in which Incels are isolated with their destructive thoughts and attitudes, which in turn only increase the extent of loneliness, develops. The lack of social exchange and feelings of social exclusion and rejection enhance thoughts of rape and murder, violence in general (Scaptura & Boyle, 2020). They are not able to communicate problems such as frustration about not finding a sexual or romantic partner to friends and family, which can worsen these feelings as input and other perspectives are missing to healthily deal with them (Scaptura & Boyle, 2020). It is therefore harder for lonely, sexually and romantically frustrated men to start a successful problem-solving process to break the circle of negative thoughts and behaviour (Scaptura & Boyle, 2020). As feelings of social isolation are an experience-based factor increasing the degree to which possible predictors, such as frustrated mating needs, act on misogyny, this research will look at the role of feelings of social isolation as a moderator on the relationship between frustrated mating needs and misogyny.

Based on the study by Konutgan (2020), it is expected that frustrated mating needs predicts hostile misogyny. Notably, this research considers benevolent sexism as a kind of misogyny not being particularly hateful towards women, as promoters of it often come from a place of appreciation for women and their qualities as “fragile creatures” (Grubbs et. al, 2019). As mentioned, benevolent sexism can often be supported by women as well, rather than hostile sexism (Grubbs et. al, 2019), indicating that benevolent sexism oftentimes is not something to belittle women, but rather to put forward their qualities. This finding furthermore suggests the idea that frustration, which mostly has a negative impact on mental health (De Castro et al., 2010), cannot have an effect on benevolent sexism, which most women and men do not believe to be something negative (Grubbs et. al, 2019). This is why in this research, benevolent sexism

will stand in contrast to hostile misogyny and is expected to not be predicted by frustrated mating needs.

The Present Study

To build upon the insights previous research gives concerning psychological factors driving misogyny, this study aims to contribute to this by investigating frustrated mating needs and feelings of social isolation as driving psychological factors for misogyny. Although Konutgan (2020) predicted misogyny with frustrated mating needs, her study did not account for the established attitudinal explanations based on SDO, RWA and SJ, which is why the current study will investigate the frustrated mating needs hypothesis above and beyond SDO, RWA and SJ. Although frustrated mating needs and social isolation were identified as characteristics of Incels, it should be noted that these characteristics exist outside of this community as misogyny is found in the general population as well. As previous research has shown that women can also endorse misogynistic attitudes, females will be included into the sample. Thus, this study will test the influence of these proposed psychological factors among non-Incel men and women. Two specific hypotheses are tested:

H1a: *Frustrated mating needs predict hostile misogyny when the already established explanations SDO, SJ and RWA are being controlled for.*

H1b: *Frustrated mating needs predict hostile misogyny but not benevolent sexism.*

H2: *High feelings of isolation are expected to moderate the effect of the frustrated mating needs condition on support for hostile misogyny against women.*

Methods

Participants

A total of 164 participants of above 18 years of age participated in this study. 92 participants were recruited through snowball sampling, using social media (Facebook, Instagram and WhatsApp) to distribute a link that leads them to the online Qualtrics questionnaire. Additionally, 72 students from the University of Twente responded to the questionnaire through the test-subject system SONA in exchange for credits that would be granted after completing the questionnaire.

Due to errors, such as the incomplete submission of the questionnaire and the failure to complete the attention checks, 50 participants were excluded and the data of N=114 ($M_{age} = 24.8$ years, age range: 18-65 years) could be used throughout the research. Looking at the

number of relationship partners the participants stated, an average of $M_{partner} = 4.2$ was found. The average of sexual partners in their lifetime resulted in $M_{sexpartner} = 4.3$. Three individuals identified themselves as Incels. Other demographic characteristics are presented in Table 1.

Table 1

Demographic characteristics of the participants (N=114)

Variables	Frequency	Percentage (%)
<i>Gender</i>		
Female	81	71.1%
Male	31	27.2%
Other/prefer not to say	2	1.8%
<i>Nationality</i>		
German	75	22.8%
Dutch	26	65.8%
Other	13	11.4%
<i>Age</i>		
18-35	104	99.5%
36-55	5	4.5%
56-65	5	4.5%
<i>Sexuality</i>		
Heterosexual	84	73.7%
Bisexual	24	21.1%
Homosexual	3	2.6%
<i>Relationship status</i>		
No relationship	47	41.2%
Living together/ engaged/ married	34	29.8%
Exclusively dating	22	19.3%
Casually dating	11	9.6%
<i>Sexual situation</i>		
Virgin	12	10.5%
Single who had sex in the past but is unable to	31	27.2%

establish current sexual rela-		
tionships		
Partnered, but in a sexless	6	5.3%
relationship		
Voluntarily celibate	6	5.3%
Not celibate	59	51.8%
<i>Number of Relationships</i>		
None	8	7%
1-4	85	74.6%
5-9	15	13.2%
10-19	5	4.4%
20+	1	0.9%
<i>Number of Sexual Partners</i>		
None	13	11.4%
1-4	61	53.5%
5-9	20	17.5%
10-19	15	4.4%
20+	5	4.4%

Design and Procedure

The design of this study entailed a cross-sectional self-report questionnaire of several scales. Data collection lasted from October 22nd until November 14th 2020. All participants were provided with an English and German version of the questionnaire and could decide which version to respond to. After the consent page, participants were asked to answer nine items concerning their general demographic information, including gender, sexual orientation, nationality, relationship status, number of relationship and sexual partners, their status regarding sexual experiences, and whether they identify as an Incel.

The participants were then confronted with two scales measuring the predictor variable (frustrated mating needs) and moderator variable (feelings of social isolation), two scales measuring the outcome variables (hostility towards women, hostile misogyny and benevolent sexism), and three scales measuring the control variables Social Domination Orientation (SDO), Right-Wing-Authoritarianism (RWA) and System Justification (SJ), respectively. To control for order effects, all of these scales were divided into blocks, in which the scales were

randomized among each other. The items within each scale were also randomized. The first block entailed the scales for frustrated mating needs and feelings of social isolation. The second block included the hostility towards women scale and the scale investigating hostile misogyny and benevolent sexism. The third block randomized the SDO, RWA and SJ scales. Three attention checks (e.g. “choose 5 if you are reading this”) were included in the questionnaire to secure the quality of the data. The survey ended with a debriefing in which participants were informed about the actual aim and hypothesis of the study. The study was approved by the Ethical Committee of the Faculty of Behavioural and Management sciences at the University of Twente.

Materials

This study was part of a larger project investigating the psychological motives driving the misogynist ideology of Incels, which included scales that were irrelevant to the current study. Here, only the measures and instruments utilized for the specific purpose of this study were presented. For each scale, the participants had to fill in seven-point-Likert scales with “strongly disagree” as the first option and “strongly agree” being the last, unless otherwise mentioned. The survey instructions, scales and according items are visible in Appendix A.

Frustrated Mating Needs. Four items taken from the Hanson Sex Attitude Questionnaire (Hanson et al., 1994) and six items created by researchers of the University of Twente (Konutgan, 2020) were selected to measure participants’ level of frustration resulting from their unsatisfied sexual and romantic needs. Items such as “Quite often, I would like to have sex, but I cannot” and “It upsets me that I don’t have a romantic partner to spend time with” (Hanson et al., 1994) were presented to find out about how the participants viewed their current sexual and romantic situation. A factor analysis was done for this scale to check if all items contribute to the variable “frustrated mating needs”. An exploratory factor analysis based on principal axis factoring was conducted on this composite scale to determine the factors of the two underlying concepts of sexual and romantic frustration. A two-factor solution that accounted for 75.04% of the variance ($n=10$), using extraction method and an oblim rotation was found. All items that loaded on factor one referred to romantic frustration whilst all items loading on factor two belonged to sexual frustration. With both kinds of these items, the overall frustrated mating needs scale was created by averaging these ($\alpha = .96$).

Feelings of social isolation. The Emotional and Social Loneliness Scale by Gierveld and Van Tilburg (2010) measures emotional loneliness, related to the lack of an intimate relationship with a partner or best friend, and social loneliness, which refers to the absence of a

broader social network such as siblings, friends, neighbors. Emotional loneliness is investigated by statements such as “I experience a general sense of emptiness” whilst social loneliness lies in statements such as “I miss having people around”. For the sake of this study though, the two constructs will be treated as one and not separately. Five of the items were positively formulated whilst the other six items were negatively formulated. The positively phrased items were reverse-coded before averaging all items to create a scale with $\alpha = .84$.

Misogynistic attitudes. In order to measure misogyny, two different scales were utilized. Firstly, the Revised Hostility Toward Women Scale (Lonsway & Fitzgerald, 1995) was used, which entailed ten items measuring the respondents’ negative opinions about women. Here, items stating more extreme hostile misogyny towards women, such as “Generally, it is safer not to trust women” were included. Secondly, a short version of the Ambivalent Sexism Inventory (Rolero, Glick, & Tartaglia, 2014) was included. This scale measures both benevolent and hostile sexism. Items such as “Many women have a quality of purity that few men possess” were stated to measure benevolent sexism whilst hostile sexism was measured with items such as “When women lose to men in a fair competition, they typically complain about being discriminated against”.

Even though the construct both of these scales measure is misogyny, the kind of misogyny they are measuring needs to be differentiated. The Revised Hostility Towards Women Scale investigates stronger and more direct misogyny towards women, whilst the Ambivalent Sexism Inventory rather deals with sexism, obvious in the opposition to feminism or the opinion of women violating domestic roles of men. For the sake of correct differentiation between the two kinds of misogyny, the more direct misogyny in the Revised Hostility towards Women Scale is called “general misogyny” in this research, whilst the items from hostile sexism taken from the Ambivalent Sexism Inventory are called “feminist-oriented misogyny”. The respective items were averaged to create three scales: general misogyny ($\alpha = .86$), feminist-oriented misogyny ($\alpha = .82$) and benevolent sexism ($\alpha = .82$).

Control variables. The scales below were included as a control variable to account for the already established explanations for why people endorse misogynistic views.

Right-wing-authoritarianism. In this six-item scale by Bizumic and Duckitt (2018), items such as “what our country needs most is discipline, with everyone following our leaders in unity” are included to find out about the participants’ beliefs about authority and freedom. The reliability of this six-item-scale is $\alpha = .73$.

System justification. The System Justification Scale by Kay and Jost (2003) contains eight opinion statements regarding the current state of gender role division and relations. The

items are based on the general system justification items developed by Kay and Jost (2003) and were reworded by them in order to set the focus on gender inequality. Items such as “Gender roles need to be radically restructured” and “Most policies relating to gender and the sexual division of labour serve the greater good” are included. The scale reliability is $\alpha = .57$.

Social dominance orientation. This four-item Short Social Dominance Orientation Scale by Pratto et al. (2013) measures whether the participants prefer group inclusion over dominance. Items such as “In setting priorities, we must consider all groups” are included. The scale showed a good reliability ($\alpha = .65$)

Data Analysis

The data of this study was analysed with the program of IBM SPSS Statistics 25. Before any analyses were conducted, the data were prepared to secure accurate assessment: items that needed reverse coding were dealt with, any relabelling of the scales and data exclusions based on attention checks were done. Next, a descriptive analysis was carried out to get an overview of the characteristics of the sample. Furthermore, a Pearson correlation analysis was conducted to retrieve information about the correlation between the variables frustrated mating needs, feelings of social isolation, general misogyny, feminist-oriented misogyny and the control variables: SDO, SJ and RWA.

To answer the hypothesis 1a, which states that frustrated mating needs positively predict misogyny (general misogyny and feminist-oriented misogyny) when SDO, SJ and RWA are being controlled for, a Pearson correlation analysis was conducted to receive information about the correlation between all of these variables. Secondly, two hierarchical regression analyses were conducted. For the first analysis, general misogyny was the dependent variable. For the second analysis, feminist-oriented misogyny was taken as the dependent variable. In the first step, the control variables SDO, SJ and RWA were entered, and in the second step, frustrated mating needs was entered.

To answer the hypothesis 1b, which states that frustrated mating needs predict misogyny (general and feminist-oriented misogyny) but not benevolent sexism when the factors SJ, SDO and RWA are being controlled for, one further hierarchical multiple regression analysis with two stages was conducted. This time, the dependent variable was benevolent sexism. SJ, SDO and RWA again presented the first block whilst frustrated mating needs was added as the second one.

To answer the second hypothesis, which states that feelings of social isolation moderate the effect frustrated mating needs have on misogyny (general and feminist-oriented misogyny), two conceptual models were tested. Therefore, two moderation analyses using the PROCESS

macro (Model 1; Hayes, 2018) were conducted by mean-centering the predictor for the computation of the interaction terms. Bias-corrected 95% confidence intervals with 5000 bootstrap samples were calculated for the conditional effects. While feelings of social isolation were included as the primary moderator (W), the independent variable was frustrated mating needs and the dependent variable in one analysis general misogyny whilst in the second one it was feminist-oriented misogyny. As covariates, the variables SJ, RWA and SDO were included in both analyses. In all statistical tests, .05 was used as the conventional level of significance.

Results

Descriptive Statistics

For the variables general misogyny, feminist-oriented misogyny, benevolent sexism, frustrated mating needs, feelings of social isolation, SDO, RWA and SJ, all scales were averaged and the means and standard deviations calculated (see Table 2).

Table 2

Descriptive Statistics

	Scale range*	Mean	Standard Deviation
General Misogyny	1-7	2.57	.81
Feminist-oriented Misogyny	1-7	2.60	1.07
Benevolent Sexism	1-7	3.17	1.13
Frustrated Mating Needs	1-7	2.92	1.41
Feelings of Social Isolation	1-7	3.04	1.06
SDO	1-7	1.85	.94
RWA	1-7	2.66	.79
SJ	1-7	3.30	.98

Note. *Likert-scale (1 = “strongly agree” to 7 = “strongly disagree”) was used.

Correlational Analysis

A full overview of correlation coefficients and significance levels are given in Table 3. Feminist-oriented misogyny, general misogyny and benevolent sexism were all found not to be significantly related to both frustrated mating needs and feelings of social isolation. As

expected though, all three outcome variables positively and significantly related to high levels of the control variables: SDO, SJ and RWA.

Table 3*Pearson correlations*

		1	2	3	4	5	6	7	8
1.	General Misogyny	-							
2.	Feminist-oriented Misogyny	.64**	-						
3.	Benevolent Sexism	.35**	.64**	-					
4.	Frustrated Mating Needs	.00	.05	-.01	-				
5.	Feelings of Social Isolation	.05	-.00	-.13	.36**	-			
6.	SDO	.24**	.44**	.34**	-.12	-.15	-		
7.	RWA	.38**	.42**	.19*	-.08	-.04	.25**	-	
8.	SJ	.25**	.43**	.32**	.01	-.01	.43**	.33**	-

Note. $N = 114$

Correlation significant at $*p < .05$. $**p < .01$. (Sig. 2-tailed)

Regression Analyses

Hypothesis 1a. The first hierarchical regression analysis for general misogyny as the dependent variable showed that model 1 with SDO, RWA and SJ together significantly predicted general misogyny (see Table 4). RWA was the only variable contributing significantly to the model whilst all other control variables, SDO and SJ did not significantly predict general misogyny. In model 2, frustrated mating needs, SDO, RWA and SJ together significantly predicted general misogyny (see Table 4). Still, only RWA significantly predicted general misogyny though. Frustrated mating needs, as the hypothesized predictor, did not, as it only showed

a very weak relationship between itself and general misogyny.

Secondly, model 1 of the second hierarchical regression analysis, with feminist-oriented misogyny as its dependent variable, indicated the control variables SDO, RWA and SJ to be significant predictors of feminist-oriented misogyny (see Table 5). In model 2 though, no significant relationship between frustrated mating needs and feminist-oriented misogyny was found. Only SDO, RWA and SJ remained to be significant predictors, with SDO and RWA predicting feminist-oriented misogyny strongly whilst SJ did so moderately.

Regarding these results, Hypothesis 1a cannot be supported as frustrated mating needs did not predict general misogyny or feminist-oriented misogyny, all together misogyny.

Table 4

Regression Analysis Summary for General Misogyny

Model	Variable	B	Std. Error	Beta	t	p
1	(Constant)	1.23	.30		4.09	.000
	SJ	.07	.08	.09	.91	.364
	RWA	.33	.09	.32	3.51	.001
	SDO	.10	.08	.12	1.27	.205
2	(Constant)	1.13	.34		3.32	.001
	SJ	.07	.08	.08	.84	.402
	RWA	.34	.09	.33	3.53	.001
	SDO	.11	.08	.13	1.33	.184
	Frustrated	.02	.05	.05	.56	.573
	Mating Needs					

Note. Model Significance 1: $F(3, 108) = .319$, $p = .573$, $R^2 = .183$

Model Significance 2: $F(3, 108) = 18.298$, $p = .167$, $R^2 = .347$

Table 5*Regression Analysis Summary for Feminist-Oriented Misogyny*

Model	Variable	B	Std. Error	Beta	t	p
1	(Constant)	.21	.35		.61	.543
	SJ	.24	.10	.21	2.43	.016
	RWA	.37	.11	.27	3.30	.001
	SDO	.31	.10	.27	-.12	.002
2	(Constant)	-.04	.40		-.12	.903
	SJ	.22	.10	.20	2.28	.025
	RWA	.38	.11	.28	3.42	.001
	SDO	.33	.10	.29	3.34	.001
	Frustrated Mating Needs	.08	.06	.11	1.39	.166

Note. Model Significance 1: $F(3, 109) = 18.298, p < .001, R^2 = .335$

Model Significance 2: $F(3, 108) = 18.298, p = .167, R^2 = .347$

Hypothesis 1b. Model 1 of the hierarchical regression analysis with benevolent sexism as the dependent variable and SDO, RWA and SJ as the predictor variables was found to be significant. Against expectations though, only SDO and SJ predicted benevolent misogyny (see Table 6). In model 2, SDO, RWA, SJ and frustrated mating needs together significantly predicted benevolent sexism. Still, only SDO and SJ significantly predicted benevolent sexism though. Frustrated mating needs, as the hypothesized predictor, did not (see Table 6).

Hypothesis 1b can therefore only be partially supported as the results from hypothesis 1a already excluded frustrated mating needs as a significant predictor. Nevertheless, frustrated mating needs, as expected, also did not significantly predict benevolent sexism.

Table 6*Regression Analysis Summary for Benevolent Sexism*

Model	Variable	B	Std. Error	Beta	t	p
1	(constant)	1.57	.42		3.74	.000
	SJ	.25	.11	.21	2.13	.035
	RWA	.09	.13	.06	.71	.476
	SDO	.28	.11	.23	2.42	.017
2	(constant)	1.53	.48		3.20	.002
	SJ	.24	.11	.21	2.09	.039
	RWA	.09	.13	.06	.72	.471
	SDO	.29	.12	.24	2.41	.017
	Frustrated Mating Needs	.01	.07	.01	.15	.875

Note. Model Significance 1: $F(3, 109) = 7.407, p < .001, R^2 = .169$

Model Significance 2: $F(3, 108) = .025, p = .875, R^2 = .170$

Moderation Analysis

A summary of the first moderation analysis results and the conditional effects of feelings of isolation on general misogyny are visible in Tables 7 and Table 8 respectively. As can be seen, the interaction effect was not found to be significant. Based on this result, feelings of social isolation did not moderate the effect frustrated mating needs had on general misogyny.

A summary of the moderation analysis results and the conditional effects of feelings of social isolation on feminist-oriented misogyny are visible in Table 9 and Table 10 respectively. The second moderation analysis with feminist-oriented misogyny as the outcome variable resulted in a non-significant model as well, with the interaction effect revealing that feelings of social isolation did not moderate the effect of frustrated mating needs on feminist-oriented misogyny.

Both moderation analyses resulted in non-significant models, leaving hypothesis 2 to not be supported. Feelings of social isolation do not moderate the effect of frustrated mating needs on general and feminist-oriented misogyny, all together misogyny.

Table 7*Moderation analysis summary for General Misogyny*

Model	Coefficient	Std. Error	t	p	LLCI	ULCI
Frustrated Mating Needs	-.09	.17	-.53	.591	-.44	.25
Feelings of Social Iso- lation	-.03	.17	-.20	.834	-.38	.31
Interaction	.02	.05	.52	.603	-.07	.12

Note. Model Significance: $F(3, 110) = .2007$, $p = .895$, $R^2 = .005$

Table 8*Conditional Effects of Feelings of Social Isolation on General Misogyny*

Feelings of Social Iso- lation	Coefficient	Std. Error	t	p	LLCI	ULCI
1.98	-.04	.08	-.47	.633	-.21	.13
3.04	-.01	.05	-.22	.824	-.13	.10
4.10	.01	.07	.20	.840	-.12	.16

Note. 1. row: For one standard deviation below the mean value.

2. row: For the mean value.

3. row: For one standard deviation above the mean value.

Table 9*Moderation Analysis Summary for Feminist-Oriented Misogyny*

Model	Coefficient	Std. Error	t	p	LLCI	ULCI
Frustrated Mating Needs	.14	.23	.61	.539	-.315	.600
Feelings of Social Iso- lation	.06	.23	.26	.794	-.39	.51
Interaction	-.02	.06	-.43	.662	-.16	.10

Note. Model Significance: $F(3, 110) = .187$, $p = .904$, $R^2 = .005$

Table 10*Conditional Effects of Feelings of Social Isolation on Feminist-Oriented Misogyny*

Feelings of Social Iso- lation	Coefficient	Std. Error	t	p	LLCI	
1.98	.08	.11	.73	.465	-.14	.31
3.04	.05	.07	.66	.505	-.10	.20
4.01	.02	.09	.22	.825	-.17	.21

Note. 1. row: For one standard deviation below the mean value.

2. row: For the mean value.

3. row: For one standard deviation above the mean value.

Discussion

The current study aimed to investigate the factors contributing to the development of misogynistic attitudes in society. Although the psychological factors examined, namely frustrated mating needs and social isolation, were extracted from Incel communities, measuring them within the sample of this study took place mostly outside of this community, with non-Incels to be able to explore these constructs within a larger population. The conducted regression analyses could only confirm the first hypothesis partially, as benevolent sexism was not predicted by frustrated mating needs. With regards to general misogyny and feminist-oriented misogyny, frustrated mating needs was not identified as a predictor above and beyond established attitudinal factors (SDO, RWA and SJ). Furthermore, the second hypothesis was opposed, leaving feelings of social isolation to not be a moderator of the effect frustrated mating needs have on misogyny.

Theoretical and Practical Implications

The results of the current study only partially supported what previous research holds on psychological factors predicting misogyny and benevolent sexism. As expected, frustrated mating needs did not significantly predict benevolent sexism. This is in line with literature concerning the differences between hostile and benevolent sexism, stating that individuals endorsing benevolent sexism mostly come from a place of love and appreciation for women (Mosso et al., 2013). As even women tend to endorse benevolent sexism rather than hostile misogyny (Grubbs et al., 2019), the findings of these study underline the idea that frustration,

a feeling mostly impacting the individual experiencing it negatively, will not lead to an increase in the will to protect women. Thus, additional support for the accurate differentiation between benevolent sexism and hostile misogyny is given through this study.

In her article, Konutgan (2020) found frustrated mating needs to be a significant predictor of misogynistic attitudes. Surprisingly, this study could not support this finding as there was no link found between the two. This could be due to several possible explanations. Firstly, Konutgan (2020) achieved to include more Incels into her research (N=28) than the current study (N=3). Even though 28 incels is still a low number for a sample that was intended to include incels exclusively, the extent to which frustrated mating needs of misogynistic men could be examined was larger than in this study, which entails almost only non-Incels. Her sample in general may have presented misogynistic attitudes way more than the one of the current study, because the target group was intended to present misogynistic men and entailed more men. This study only received low means on the misogyny scales, indicating that measuring the links to misogyny could have been more successful if there would have been a focus on respondents with stronger misogynistic views. This is in line with Grunau (2020), who revealed a higher mean score on misogyny scales for Incel participants than for non-Incel participants.

With regards to feelings of isolation, this study did not find significant results when it comes to this experience-based factor moderating the effect frustrated mating needs have on misogyny. This stands in contrast to Scaptura and Boyle (2019), stating that social isolation did indeed increase the hatred towards women. This dissimilarity might be due to the difference in labelling this construct – while this study called it “feelings of social isolation”, Scaptura and Boyle (2019) measured “social exclusion/ rejection”. This might have created outcomes measuring two different constructs, with Scaptura and Boyle (2019) rather investigating the participants’ feelings towards shunning, weakness, defeat and rejection. Here, the participants scoring high would have identified as social outcasts, not being accepted or loved by anyone close. In comparison, this study took an indirect take on isolation as the isolation being investigated could also be due to shyness or situational factors, like moving house or switching jobs.

Although this study did not find relevant result to combat the issue of hatred towards women in society, it is still an important contribution to the understanding of misogyny and stands as a basis for further research. Additionally, and most importantly, there is a novelty in testing individual-level psychological factors such as frustrated mating needs and feelings of social isolation. In previous research, mostly attitudinal factors, which are very similar to the outcome variable of misogyny, were investigated.

Strengths, Limitations and Recommendations for Future Research

Several strengths and weaknesses can be noted when looking at the execution of the present research. One major strength was the inclusion of control variables when analysing the hypothesized constructs. By including previously established explanations for misogyny (SDO, RWA and SJ), more robust and insight outcomes were attained, contributing to the research already done around frustrated mating needs and misogyny. As previous studies have indeed shown a relationship between frustrated mating needs and misogynistic attitudes (Konutgan, 2020), the investigation into how strong this relationship stays when already established factors are being controlled for was important to test whether frustrated mating needs as another factor significantly influencing misogyny.

Certain limitations to this study concern the sample. The first one entails the majority of participants being women. With 71% of the participants being female, this study was not very successful in targeting the group most likely to endorse misogynistic attitudes: heterosexual men (Jones, Trott & Wright, 2019). Although women can be part of the misogynistic community as well, Grubbs et al. (2019) states that there is a gender difference for hostile misogyny and benevolent sexism, with women more prone to endorse the latter. Having so many women in the sample did not give enough insight into the extent to which frustrated mating needs and feelings of social isolation play a role in misogyny, because the women in this sample might not have shown strong misogynistic tendencies to begin with. In fact, the means on these variables were very low, suggesting that the variances within these scales were only little. Inferences about frustrated mating needs and feelings of social isolation with regard to misogyny were therefore hard to make. With this information in mind, a rather male-dominated sample should be aimed at in future research to make it more suitable to the current existing literature on the topic. As Konutgan (2020) used the frustrated mating needs scale as well and achieved contrasting results, future research should aim to extend that study and investigate the role of frustrated mating needs and social isolation further when there is more variance.

A second limitation to this sample is the majority of it being students under the age of 25 years, as many participants took part through SONA systems to gain credit points. As the topic of misogyny is being widely discussed in these circles through education and media, self-reporting about oneself being misogynistic in current times is not socially desirable and therefore hard to do for many people in this context. This is supported by Mayhew et al. (2018), who state that the experience of university indeed widens students' horizons when it comes to political views. Rather than taking an extreme approach, they learn to appreciate views different than their own to work towards common goals alongside each other (Mayhew et al., 2018).

A third limitation is the low number of Incels in the sample. Surely, this research did not specifically intend to investigate the Incel community, but rather the general population as a whole. Nevertheless, Incels or people that are involuntarily celibate have shown to score higher on misogyny scales than non-Incels (Grunau, 2020). This is why the results of future research would be more fruitful if there was a focus on finding a high number of Incels or people that are involuntarily celibate, as the factors surrounding the development of misogyny, as well as the possibility of such factors mainly being prominent in Incel communities, could be investigated.

Lastly, further limitations concerning the cross-sectional, self-report design of the research need to be mentioned. As this is a cross-sectional study, causality can be assumed, but not assured. Thus, future studies should look into experiments to further investigate causes for misogyny. By using priming scenarios eliciting feelings of frustrated mating needs or social isolation within the sample, misogyny as a consequence could be further looked into.

Conclusion

Although there were several limitations bound to it, this study adds to the existing literature concerning misogynistic attitudes and the factors contributing to their development, specifically frustrated mating needs and feelings of social isolation. By investigating the effect of frustrated mating needs of misogyny above and beyond the inclusion of predominant explanations such as preferences for group hierarchy, right-wing political attitudes and preferences for system justification, this study revealed results contradicting preceded literature. With frustrated mating needs not significantly predicting misogyny in this study, a definite conclusion to what the relationship between the two is needs to wait until further research is done. Improvements based on the limitations of this research, such as the inclusion of more men, non-students and priming scenarios, should be taken into account. Moreover, by using the frustrated mating needs scale in this study, further empirical evidence for its psychometric properties was contributed. In conclusion, these findings add to social psychology literature concerning misogyny by underlining the involvement of the beforementioned predominant explanations for it, namely SDO, RWA and SJ. This way, interventions can be aimed more directly towards reducing misogynistic attitudes and enhancing the wellbeing of the society as a whole.

REFERENCES

- Austin, D. E., & Jackson, M. (2019). Benevolent and hostile sexism differentially predicted by facets of right-wing authoritarianism and social dominance orientation. *Personality and individual differences*, 139, 34-38. doi:10.1016/j.paid.2018.11.002
- Akrami, N., & Ekehammar, B. (2006). Right-wing authoritarianism and social dominance orientation. *Journal of Individual Differences*, 27(3), 117-126. doi:10.1027/1614-0001.27.3.117
- Akrami, N., Ekehammar, B., & Yang-Wallentin, F. (2011). Personality and social psychology factors explaining sexism. *Journal of Individual Differences*. doi:10.1027/1614-0001/a000043
- Baele, S. J., Brace, L., & Coan, T. G. (2019). From “Incel” to “Saint”: Analyzing the violent worldview behind the 2018 Toronto attack. *Terrorism and Political Violence*, 1-25. doi:10.1080/09546553.2019.1638256
- Banet-Weiser, S., & Miltner, K. M. (2016). #MasculinitySoFragile: culture, structure, and networked misogyny. *Feminist Media Studies*, 16(1), 171-174. doi:10.1080/14680777.2016.1120490
- Bizumic, B., & Duckitt, J. (2018). Investigating right wing authoritarianism with a very short authoritarianism scale. *Journal of Social and Political Psychology*, 6(1), 129-150. doi:10.5964/jspp.v6i1.835
- Blommaert, J. (2017). Online-offline modes of identity and community: Elliot Rodger’s twisted world of masculine victimhood. *Tilburg Papers in Culture Studies*, 200, 1-23.
- Chavez, N., & McLaughlin, E. C. (2018). Tallahassee gunman reported for harassing women, police say; records show groping case dropped. *CNN News*.
- De Castro, A. B., Rue, T., & Takeuchi, D. T. (2010). Associations of employment frustration with self-rated physical and mental health among Asian American immigrants in the US labor force. *Public Health Nursing*, 27(6), 492-503.
- Donnelly, D., Burgess, E., Anderson, S., Davis, R., & Dillard, J. (2001). Involuntary celibacy: A life course analysis. *The Journal of Sex Research*, 38(2), 159-169. Retrieved from <http://www.jstor.org.ezproxy2.utwente.nl/stable/3813706> doi:10.1080/00224490109552083
- Gierveld, J. D. J., & Van Tilburg, T. (2010). The De Jong Gierveld short scales for emotional and social loneliness: tested on data from 7 countries in the UN generations and gender surveys. *European journal of ageing*, 7(2), 121-130. doi:10.1007/s10433-010-0144-6

- Glick, P., & Fiske, S. T. (1996). The ambivalent sexism inventory: Differentiating hostile and benevolent sexism. *Journal of personality and social psychology*, 70(3), 491.
doi:10.1037/0022-3514.70.3.491
- Glick, P., & Fiske, S. T. (2001). An ambivalent alliance: Hostile and benevolent sexism as complementary justifications for gender inequality. *American psychologist*, 56(2), 109. doi:10.1037/0003-066X.56.2.109
- Grunau, K. (2020). *Involuntary celibacy: Personality traits amongst misogynistic online communities*. University of Twente. Hoffman, B., Ware, J., & Shapiro, E. (2020). Assessing the threat of Incel violence. *Studies in Conflict & Terrorism*, 43, 1-23.
doi:10.1080/1057610X.2020.1751459
- Høiland, T. (2019). *Incels and the stories they tell. A narrative analysis of Incels' shared stories on Reddit* (Master's thesis).
- Jaki, S., De Smedt, T., Gwóźdź, M., Panchal, R., Rossa, A., & De Pauw, G. . (2019). Online hatred of women in the Incels.me forum: Linguistic analysis and automatic detection. *Journal of Language Aggression and Conflict*, 7(2), 240-268.
doi:10.1075/jlac.00026.jak
- Jensen, N. (2020) Understanding and Addressing “The Incel Rebellion”.
- Jones, C., Trott, V., & Wright, S. (2019). Sluts and soyboys: MGTOW and the production of misogynistic online harassment. *New Media & Society*, 0(0), 1461444819887141.
doi:10.1177/1461444819887141
- Jost, J. T., & Kay, A. C. (2005). Exposure to benevolent sexism and complementary gender stereotypes: consequences for specific and diffuse forms of system justification. *Journal of personality and social psychology*, 88(3), 498.
doi:10.1037/0022-3514.88.3.498
- Konutgan, S. (2020). To what extent are Incels' misogynistic and violent attitudes towards women are driven by their unsatisfied mating needs and entitlement to sex? (Bachelor's thesis, University of Twente).
- Kukla, Q. R. (2020). Misogyny and Ideological Logic. *Philosophy and Phenomenological Research*, 101(1), 230-235. doi:10.1111/phpr.12698
- Maxwell, D., Robinson, S. R., Williams, J. R., & Keaton, C. (2020). “A Short Story of a Lonely Guy”: A qualitative thematic analysis of involuntary celibacy using Reddit. *Sexuality & Culture*. doi:10.1007/s12119-020-09724-6

- Mayhew, M. J., Rockenbach, A. N., Selznick, B. S., Zagorsky, J. L. (2018). Does college turn people into liberals? The conversation. <https://theconversation.com/does-college-turn-people-into-liberals-90905>
- Mosso, C., Briante, G., Aiello, A., & Russo, S. (2013). The role of legitimizing ideologies as predictors of ambivalent sexism in young people: Evidence from Italy and the USA. *Social Justice Research*, 26(1), 1-17.
- Nelson, L. (2014, May 29). It's a way to retrieve your manhood': a cultural explanation of the Santa Barbara shooting. Retrieved March 13, 2020, from <https://www.vox.com/2014/5/29/5754786/the-santa-barbara-shootings-and-angry-white-men>
- Pratto, F., Cidam, A., Stewart, A. L., Zeineddine, F. B., Aranda, M., Aiello, A., ... & Eicher, V. (2013). Social dominance in context and in individuals: Contextual moderation of robust effects of social dominance orientation in 15 languages and 20 countries. *Social Psychological and Personality Science*, 4(5), 587-599.
doi:10.1177/1948550612473663
- Rollero, C., Peter, G., & Tartaglia, S. (2014). Psychometric properties of short versions of ambivalent sexism inventory and ambivalence toward men inventory.
doi:10.4473/TPM21.2.3
- Ruthig, J. C., Kehn, A., Gamblin, B. W., Vanderzanden, K., & Jones, K. (2017). When women's gains equal men's losses: Predicting a zero-sum perspective of gender status. *Sex Roles*, 76(1-2), 17-26.
- Scaptura, M. N. (2019). *Masculinity threat, misogyny, and the celebration of violence in white men*. Virginia Polytechnic Institute and State University.
- Scaptura, M. N., & Boyle, K. M. (2020). Masculinity Threat, "Incel" Traits, and Violent Fantasies Among Heterosexual Men in the United States. *Feminist Criminology*, 15(3), 278-298. doi:10.1177/1557085119896415
- Sibley, C. G., Wilson, M. S., & Duckitt, J. (2007). Antecedents of men's hostile and benevolent sexism: The dual roles of social dominance orientation and right-wing authoritarianism. *Personality and Social Psychology Bulletin*, 33(2), 160-172.
doi:10.1177/0146167206294745
- Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review*, 12(3), 248-279.
doi:10.1177/1088868308319226

- Sidanius, J., & Pratto, F. (2001). *Social dominance: An intergroup theory of social hierarchy and oppression*. Cambridge University Press.
- Tomkinson, S., Attwell, K., Harper, T. (2020). 'Incel' violence is a form of extremism. It's time we treat it as a security threat. The Conversation. <https://theconversation.com/incel-violence-is-a-form-of-extremism-its-time-we-treated-it-as-a-security-threat-138536>
- Williams, D., & Arntfield, M. (2020). Extreme Sex-Negativity: An Examination of Helplessness, Hopelessness, and Misattribution of Blame Among "Incel" Multiple Homicide Offenders. *Journal of Positive Sexuality*, 6(1).
- World Health Organization (2017). *Violence against women*. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/violence-against-women#:~:text=Global%20estimates%20published%20by%20WHO,vio-lence%20is%20intimate%20partner%20violence>.
- Young, O. (2019). What Role Has Social Media Played in Violence Perpetrated by Incels?. Chapman University Digital Commons.

Appendix A – The 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)

- Its 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 noting 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. All

together, 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.