What Incels Can Tell Us About Misogyny: Evaluating Sexual Frustration and

Pornography Usage as Potential Factors for Misogyny

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Abstract

Misogyny still constitutes a major problem in society. Previous research mainly focused on cultural structures and social mechanisms to explain misogyny. However, there is a lack of research that aims to explain what other factors might contribute to misogyny. The current study tried to fill that gap by developing new ideas about what factors relate to misogyny derived from the special case of the Incel community. Based on these new insights and previous research, it was proposed that general pornography usage, violent pornography usage and sexual frustration could be potential factors that drive misogynistic attitudes and rape proclivity. In an online cross-sectional study (N=202), these variables were tested in a mixed convenience sample including 20 Incels and 182 non-Incels. The measures for general pornography usage and violent pornography usage were developed by the author. Sexual frustration was measured with the Sexual Frustration Scale (Gizzarelli & Scott, 1994). Moreover, misogynistic attitudes (acceptance of modern myths about sexual aggression, hostility towards women, and sexual objectification of women) were assessed with the Acceptance of Modern Myths About Sexual Aggression Scale (Gerger, Kley, Bohner & Siebler, 2007), the Hostility Towards Women Scale (Check, 1985) and the Sexual Reductionism Scale (Peter & Valkenburg, 2007). Furthermore, as a measure for rape proclivity, the Likelihood of Rape Scale was used (Malamuth, 1981). Bivariate correlations and multiple regressions were conducted which showed that sexual frustration significantly predicted sexual objectification of women, hostility towards women and acceptance of modern myths about sexual aggression. Moreover, general pornography usage predicted sexual objectification of women. However, none of the determined factors were able to predict rape proclivity. Lastly, Incels scored higher on misogynistic attitudes than non-Incels. Based on these findings it was concluded that sexual frustration is an important factor in contributing to misogyny. It is recommended that future research should focus on verifying the relationship between sexual frustration and misogynistic attitudes and to investigate what factors influence sexual frustration.

According to a survey conducted by the European Union in 2014, every third women over the age of 15 experienced sexual violence (European Union Agency for Fundamental Rights, 2014). Moreover, every 20th woman has been raped since being 15 years old. In addition to this, eleven percent of all women older than 15 experienced different forms of online misogyny. Based on these findings, the European Union Agency for Fundamental Rights concludes that sexually motivated crimes against women constitute a major problem.

Research has shown that misogyny, "the dislike of, contempt for, or ingrained prejudice against women" (Stevenson, 2010, p. 1330), is linked to the above outlined crimes against women (Gervais & Eagan, 2017; Ging & Siapera, 2018). Several theories have been proposed that aim to explain the emergence and maintenance of misogyny. According to Wahlsten (1998), biological determinism serves as a justification of men for viewing women as the weaker sex. She argues that this view is proclaimed by men as a rationale to suppress women and keep their social and political power in society. Moreover, personality traits have been shown to be related to sexism against women in both men and women (Akrami, Ekehammar, & Yang-wallentin, 2011; Sibley & Duckitt, 2008). In a meta-analysis by Sibley and Duckit (2008), it was concluded that persons who score low on the big five personality traits agreeableness and openness to experience are more likely to be sexist. They further explain that these relationships can be explained by a mediating effect of right-wing authoritarianism (i.e. the tendency to adhere and support authoritative structures; Saunders & Ngo, 2017) and social dominance orientation (i.e. the belief that there is a hierarchy among groups; La Macchia & Radke, 2020). According to Sibley and Duckitt (2008), a person who is low in agreeableness will be high in right wing authoritarianism which subsequently predicts sexism. Similarly, someone with low openness to experience will be more social dominance oriented and thus be more sexist. Moreover, social factors have also been deemed to play an important role in contributing to sexism (Akrami et al., 2011). For example, Akrami and colleagues (2011) showed that big-five personality factors and social processes such as the degree to which a person identifies with his gender predicts sexism independently from each other. In addition to this, it is of importance to clarify that women can likewise hold misogynistic attitudes. For example, Sibley, Overall and Duckitt (2007), found that women who believe that they need protection and care of men are more likely to hold hostile views towards their own gender.

Misogynistic attitudes towards women can also be expressed on social media. Sexual harassment and cyberstalking on social media platforms such as Facebook and Instagram have increased (Duggan, 2017; European Union Agency for Fundamental Rights, 2014). Moreover,

online communities whose members especially tend to share misogynistic views have increased in popularity and usage (Farrell, Fernandez, Novotny, & Alani, 2019; Ging & Siapera, 2018). In the following section, one of these online communities, the Incel community, which is well-known for having strong misogynistic ideologies, will be addressed. Based on the special case of Incels, a novel suggestion will be proposed that aims to explain factors that might contribute to misogyny in society.

Misogyny and the Special Case of Incels

An involuntary celibate is someone who seeks a romantic or sexual relationship but is not able to establish one. The term Incel is an abbreviation of involuntary celibate but represents more than the unmet desire of a sexual relationship. Incels are part of online communities whose members are mostly male and tend to hold misogynistic views (Jaki et al., 2019). It is important to note that not all people who are involuntarily celibates consider themselves as Incels because they may not know the terminology, or they may not want to be part of that community. The term Incel gained popularity when people who were unable to find a partner started to form online self-help groups and shared their experiences. What started as a small online self-help group (Beauchamp, 2019), developed into multiple online forums of which some now share extreme forms misogynistic and anti-feministic beliefs (Donnelly, Burgess, Anderson, Davis, & Dillard, 2001; Maxwell, Robinson, Williams, & Keaton, 2020; Jaki et al., 2019). Due to the high amount of different Incel online communities, which can also be hidden and hardly accessible, it is difficult to estimate to what extent hatred against women is part of these forums.

Incels gained worldwide attention when Elliot Rodger, a 24-year-old man killed six persons and himself in 2014. His manifesto gave reasons to believe that his rage and misogyny seemed to at least partly stem from his inability to establish a romantic relationship with women (Blommaert, 2018). After the massacre, he was praised by some members of the Incel community as their hero, calling him the "supreme gentlemen", a title that Roger gave himself before (Young, 2019). Four years later in April 2018, Alek Minassian, posted on Facebook: "The incel Rebellion has already begun!... All hail the Supreme Gentlemen Elliot Rodger". Moments after posting he killed 10 people by driving a van into pedestrians (Young, 2019). These killings can be clearly connected to the Incel community and they point at the extreme forms of misogyny that can be found among the Incels.

Incels share a distinct vocabulary that represents their misogynistic concepts and beliefs (Jaki et al., 2019, Baele, Brace, & Coan, 2019). For example, "Stacy" represents the attractive women who sleeps with a lot of men. For the Incel community this stereotyped representation

of a woman is one of the targets for their anger and frustration. Because from their point of view, the good looking "Stacys", that they desire only have sex with attractive and successful "alpha" males (Baele, Brace, & Coan, 2019, Jaki et al., 2019). In addition to this, the term "Stacy" was found to be one of the 100 most used words in the Incel community Incels.me. (Jaki et al., 2019). Jaki and colleagues (2019) conducted a linguistic study that investigated how members of this Incel community express their hatred towards women. With the usage of deep and machine learning the written language and underlying constructs were analyzed. It was reported that for the investigated forum, about 30% of the posts were misogynistic.

Another prominent term in the Incel community is "lookism" (Jaki et al., 2019; Papadamou, Zannettou, & Blackburn, 2020). "Lookism" refers to the belief that physical attractiveness is the major factor in determining dating success. Baele and colleagues (2019), found, that this preoccupation with looks is also represented among some of the most popular topics in the incels.me forum. In this forum, Incels judge other women regarding their attractiveness. Words like "fat" and "bad" are used to devaluate and dehumanize women based on their appearance. Similarly, in the incels.me forum words describing physical traits such as "pretty" and "ugly" were among the top 100 used keywords (Jaki et al., 2019)

One of the main concepts in the Incel community is the *black pill* (Papadamou et al., 2020). If someone swallowed the *black pill*, he understands that women only choose good looking, dominant and strong men that are on top of the sexual market hierarchy. Some Incels give shallow evidence that shall prove this belief (Baele et al., 2019). Based on these "insights" they conclude that they will always fail to find a romantic partner in this society (Baele et al., 2019, Papadamou et al., 2020). The hopelessness and frustration stemming from these views can be linked to their women hate (Maxwell et al., 2020). One proclaimed "solution" for this hopeless situation is to develop back into a traditional society where women are subordinate to men (Papadamou et al., 2020) and where men are entitled to having a woman (Young, 2019).

Another more extreme "solution" can be found in the concept of the *rape pill* (Beauchamp, 2019). The *rape pill* is a lesser used concept in the Incel community but entails violent and radical views that are spread among some of its members. The view goes so far as it states that women can be drawn to men who rape them because rape signals dominance to the woman which in turn attracts her. Incel members provide shallow evidence in support of their ideas. For example, they state that it is scientifically evident that women have a desire to be raped because they commonly fantasize about it and prefer pornographic content which entails

forced sex/rape. In relation to this, clear descriptions of violent fantasies including rape and killing were found in the forum (Jaki et al., 2019).

The above outlined misogynistic views of the Incel community beg the question of how and why the members form and hold a strong misogynistic mindset. Jaki et al. (2019), argued that Incels might be encouraged to state strong and extreme misogynistic views due to their desire to receive more attention and praise. Furthermore, according to the echo chamber effect, people turn to communities that already share similar beliefs. Thus, when joining such a community the views of the individual can get more extreme as the views are only evaluated in a bubble of likeminded people and do not get criticized (Colleoni et al., 2014). Another effect which could contribute to stating misogynistic views is the so-called disinhibition effect (Suler, 2004). This mechanism, strengthened by online anonymity, can lead to the expression of more extreme views and opinions as no real-life feedback and consequences are feared.

However, the above outlined theories can only explain why people state misogynistic beliefs but not why they develop and keep them. In the following sections, this knowledge gap will be approached by analyzing factors that might influence misogyny. It is assumed, that the factors that contribute to misogyny in Incels will also exist in a less salient form in normal society. Thus, finding new factors that affect misogyny in Incels are likely to be generalizable to the normal population. It is suggested that misogynistic attitudes may be partly affected by pornography usage and sexual frustration. The following sections will substantiate this claim.

Misogyny in Pornography and Incels

In the above mentioned linguistic analysis by Jaki et al. (2019), sex is described as one of the most discussed topics in the incels.me forum. Sex is mostly portrayed and imagined from a pornographic point of view (Jaki et al., 2019). The linguistic analysis revealed that pornographic terms such as "ass" and "cum" ranked high among the most used words, and links to porn websites were posted frequently (Jaki et al., 2019). When accessing one of the most famous Incel forums, Incels.co, one of the links in the main menu directly refers to a porn website which provides hundreds of links to different internet porn pages. Based on these findings and observations, it can be concluded that at least some parts of the Incel community frequently engages with pornographic content. In relation to this, it has been shown that pornography itself entails related misogynistic and sexist depictions (Peter & Valkenburg, 2016), which could be a reason why Incels are drawn to the consumption of it.

Based on these findings, pornography consumption may play a role in the development and perseverance of misogynistic views. In relation to this, Peter and Valkenburg (2007)

investigated whether the consumption of sexually explicit material is related to viewing women as sexual objects. They found that the association is the strongest for online pornography. In a follow-up study, Peter and Valkenburg (2009) analyzed the relationship between objectifying women and sexual explicit content with the help of a structural equation model. They concluded that there is an interdependent causal relationship between both variables. According to them, watching pornographic content leads to seeing women as sexual objects which in turn leads to more pornography consumption. Moreover, Incels' misogynistic views are often expressed by sexual objectification of women (Jaki et al., 2019c, Baele et al., 2019). Thus, misogynistic views may be driven by pornographic consumption.

Another overlap of pornography and the Incel community is the view of the woman, as in most cases pornography portrays women as being dominated by and subordinate to men (Hald, Malamuth, & Yuen, 2010). Pornography seems to depict at least partly the hoped for social structure in which men have control over women (Papadamou et al., 2020). Furthermore, according to Sun, Bridges, Johnson, and Ezzell (2016), pornography viewers form a cognitive script derived from porn. This script gets derived and abstracted by the consumed pornography and is used in real life. The script can thus entail attitudes and views about sex itself but also about the roles of women and men in general. In connection to the above outlined research, the cognitive scripts formed by pornography consumption could entail the misogynistic ideas such as that women should be subordinate and submissive.

In addition to that, there is the domain of violent porn which explicitly shows women getting forced to have sex including violent acts (Hald et al., 2010). This form of pornography can be related to the Incel belief that men show dominance by raping women and they are in turn attracted to it. In a meta-analysis by Hald et al. (2010), pornography was positively associated with supporting violence against women. Moreover, the relationship was even stronger when the consumed pornography was of violent nature.

Sexual Frustration

One factor that might also contribute to forming and holding negative attitudes towards women is sexual frustration. It has been shown that frustration and anger about the lack of sexual encounters is common among Incels (Donnelly et al., 2001). The term involuntary explicitly describes that the current state of not having a sexual partner is undesired and a change is wanted. Most members of the movement are clearly frustrated by their unmet desires for sex and intimate partnership. Based on previous descriptions, it is argued that sexual frustration is a central element in the Incel community.

In relation to this, the frustration-aggression theory (Berkowitz, 1989) states that with increased frustration to attain a goal, anger and aggression will increase (Grossarth-Maticek, Eysenck, & Vetter, 1989). Berkowitz argues that when provided with more aggressive cues people tend to be even more aggressive as a reaction to their frustration. Applying this idea to the context of misogyny, the theory proposes that a person who is sexually frustrated will be angrier and more aggressive. Furthermore, it has been shown that frustration can be related to the formulation of prejudice (Cowen, Landes, & Schaet, 1959). In connection to this, violent fantasies, such as depicted in the Incel community (Jaki et al., 2019) have been shown to be related to overt aggression (Smith, Fischer, & Watson, 2009) and can be seen as an expression of anger. Moreover, Kanin, (1983) showed that relative sexual frustration seems to be an important factor in the explanation of rape, which is an extreme form of aggression against women.

Based on the above given assumptions, it is assumed that sexual frustration is related to anger and aggression, which are believed to possibly take the form of misogynistic views such as hostile attitudes towards women or a tendency for sexual violence such as rape proclivity.

Present Study

The current study aims to increase the knowledge about what factors drive misogyny in society. The Incel community provides the opportunity to investigate a subculture that holds strong misogynistic views that are rarely expressed in such an explicit and extreme manner. It is assumed that the factors that contribute to misogyny in the Incel community are not unique to this particular subgroup but can be generalized to society because these factors are likely to exist in a less intense form in the normal population. Therefore, the Incel community gives a new incentive to investigate what factors may influence the emergence and persistence of misogyny in society. New findings that provide insights in what aspects shape misogyny can be used to design future interventions aimed at decreasing misogyny.

Based on the above determined factors that may contribute to misogyny, the following hypotheses will guide the research:

H1: General pornography usage, violent pornography usage and sexual frustration are positively associated with misogynistic views.

H2: General pornography usage, violent pornography usage and sexual frustration are positively associated with rape proclivity.

Methods

Design

The design of the study was cross-sectional and measured different variables at one point of time.

Participants

It is of importance to mention, that the initial aim of the study was to create a sample that includes only Incels. Online Incel communites were used to recruit participants. These included forums on webpages such as Reddit and Facebook groups. However, due to difficulties in the recruitment process, only 20 Incels were reached. This sample size was deemed to be insufficient for the purpose of the study. Therefore, a convenience sample was used that also entailed data from the normal population. The survey was distributed to students of the University of Twente in exchange for study credits. Lastly, the study was also promoted to friends and relatives. In total 317 participants provided data for the study. Of all participants 115 participants were excluded due to insufficiently answered surveys or failed attention check items, resulting in 202 qualified participants. The final data set included the above named 20 Incels, which made up 10.1 % of the sample. The sociodemographic characteristics of the sample can be found in Table 1.

Table 1

Sociodemographic Characteristics of Participants

Characteristics	*n*	%
Gender		
Female	120	59.4
Male	78	38.6
Other	4	2.0
Nationality		
Germany	68	33.7
United States	50	24.8
Netherlands	31	15.3
United Kingdom	14	6.9
Canada	7	3.5
Other	32	15.8

Ethnicity		
Caucasian/White	176	87.2
Asian	5	2.5
Black	5	7
Hispanic/Latino	2	1
Multi-ethnic	8	4
Sexual Orientation		
Heterosexual	132	65.3
Homosexual	9	4.5
Bisexual	53	26.2
Asexual	4	2
Other	4	2
Educational Level		
Lower than high school	6	3
High school graduate	98	48.5
College graduate	32	15.8
Bachelor	47	23.3
Master	18	8.9
PhD/higher level degree	1	.5
Employment Status		
Student	113	55.9
Full-time	48	23.8
Part-time	13	6.4
Unemployed	19	9.4
Retired	1	.5
Self-employed	3	1.5
Unable to work	5	2.5
Socioeconomic Status		
Lower than Middle Class	55	27.3
Middle Class	94	46.5
Higher than Middle class	53	26.3
Relationship Status		
Not in relationship or dating	82	40.6

causally dating	20	9.9
exclusively dating	55	27.2
living together/engaged/married	45	22.3

Note. $N = 202$. Participants were on average 24.9 years old ($SD = 7.0$) and 20 (10.1 %) identified as Incel.

Materials

Misogynistic Beliefs

Misogynistic beliefs were measured with three constructs: First, the *Sexual Reductionism Scale* as proposed by Peter & Valkenburg (2007) was used to measure the sexual objectification of women (see Appendix A). Their measure includes 10 items that measure the degree to which a person perceives women as objects, for example: *"attractive women give men prestige"*. In order to achieve a higher variability, response categories were adjusted and ranged from 1: strongly disagree to 7: strongly agree. The degree of objectification of women is strong when the scores on the scale are high. For the current study, the Cronbach's alpha was .84.

Secondly, the 12-item *Acceptance of Modern Myths about Sexual Aggression Scale* by Gerger, Kley, Bohner and Siebler (2007) was chosen to measure misogynistic beliefs and attitudes (see Appendix B). This measure intends to determine whether and to what degree a person shares common myths about sexual aggression. The scale consists of eleven items, for example: "*Women like to play coy. This does not mean that they do not want sex.*". Responses were measured on a 7-point Likert scale ranging from 1: strongly disagree to 7: strongly agree. A person with high scores on this scale tends to accept modern myths a about sexual aggression and rape. In this study the measure showed a Cronbach's alpha of .95.

The third measure for misogyny was the 10-item *Hostility towards Women Scale* by Lonsway and Fitzgerald (1995) (see Appendix C). This scale intends to capture the degree to which a person holds hostile and angry attitudes towards women (Check, 2014). Items included statements such as: *"I am easily angered by (other) women."*. Responses were measured on a 7-point Likert scale ranging from 1: strongly disagree to 7: strongly agree. A high score on the scale tends to indicate a higher hostility towards women. In the current study the measure had a Cronbach's alpha of .90.

Rape Proclivity

Rape proclivity was measured with the 1-item *Likelihood of Rape Measure* (Malamuth, 1981), in order to determine whether participants would rape someone if they would not be

caught and neither punished (see Appendix D). The response choices ranged from 1: strongly disagree to 7: strongly agree. A high score on the question indicates a high degree of rape proclivity.

Sexual Frustration

In order to determine the sexual frustration of participants the 5-item *Sexual Frustration Scale* operationalized as by Gizzarelli & Scott (1994) was used to measure sexual frustration (see Appendix E). Response answers ranged from 1: strongly disagree to 7: strongly agree. Items of the scale included statements such as: *"I don't have sex as often as I would like to"*. Scoring high on the scale indicates a high degree of sexual frustration. For the current study the scale showed a Cronbach's alpha of .94.

Pornography usage

To measure the actual consumption of pornography and to distinct between violent and general pornography usage, two items were constructed which asked for the amount and type of pornography that was watched by the participant in the last six months (see Appendix F). In order to distinguish between nonviolent and violent pornography, definitions for both types were applied as proposed by Hald et al., (2010). The first item measured general pornography consumption and the second violent pornography consumption. Answer options ranged on a 10- point Likert scale from *never* to *several times a day*. High scores on both measures indicated a high usage of the belonging type of pornography.

Procedure

The survey was presented to participants in the form of an online questionnaire. It was created and displayed with the online software Qualtrics. The questionnaire started with the informed consent that explained the goal of the study, ensured anonymity and provided participants with contact information in case of questions. In order to participate in the study, respondents had to agree to the consent form. Afterwards, general information about the survey, such as the aim of the study, which was disclaimed as: "to investigate people's perceived motives, attitudes and preferences in relationships" was provided and participants were informed that they have the chance to win an Amazon voucher if they enter their e-mail address at the end of the study (see Appendix G). Demographical questions were posed to the respondents, which asked for age, gender, nationality, ethnicity, sexual orientation, level of education, employment status, socio-economic status and relationship status (see Appendix H). Moreover, one question was displayed that asked whether the participant identified as an Incel (see Appendix I).

The conducted study was part of a larger project that investigated variables such as mental health characteristics, personality and different motives. Therefore, the survey also entailed a variety of measures and instruments that were not relevant for this study. The above stated measures and scales were applicable to this study. After answering the demographical questions, the participants proceeded to respond to different measures, which were posed in a random order. After completing these questions, the participants were, debriefed, thanked for their effort and were given the option to enter their e-mail address for the Amazon voucher raffle (see Appendix J). The estimated time to fill out the questionnaire was 20 minutes. The data was collected from the 10th of April 2020 to the 13th of May 2020.

Data analysis

First, the characteristics of the Incel and non-Incel subgroups were analyzed by using descriptive statistics. Afterwards, to test the first hypothesis, Pearson correlations between general pornography usage, violent pornography usage, sexual frustration and the variables for misogynistic views, namely hostility towards women, modern myths about sexual aggression and sexual objectification were checked. Next, three multiple regression analyses with pornography usage, violent pornography usage and sexual frustration as predictive variables and the misogynistic variables (modern myths about sexual aggression, hostility towards women and sexual objectification) as outcome variables were conducted. For the second hypothesis, Pearson correlations of general pornography usage, violent pornography usage and sexual frustration with rape proclivity were checked. Next, a multiple regression analysis was calculated with general pornography usage, violent pornography usage and sexual frustration serving as predictive variables and rape proclivity as the outcome variable.

For the correlational analyses the effect size was estimated to be large if r was higher than .50, moderate when varying around .30 and low when varying around .10. All hypotheses were accepted if the results were at a significance level of $p < .05$. In order to execute these analyses, the statistical software SPSS 24 was used.

Results

Descriptive Statistics

The mean scores and standard deviations of the Incel and non-Incel subgroup for the variables general pornography usage, violent pornography usage, sexual frustration, hostility towards women, acceptance of modern myths about sexual aggression, sexual objectification, and rape proclivity are presented in Table 2.

Table 2

Descriptive Statistics for the Incel Subgroup and non-Incel Subgroup

		Incel		non-Incel	
	Scale Range	*M*	*SD*	*M*	*SD*
General Pornography Usage	1-10	6.70	2.85	4.82	2.78
Violent Pornography Usage	1-10	2.90	2.36	2.24	2.10
Sexual Frustration	1-7	5.52	1.56	2.69	1.43
Hostility Towards Women	1-7	4.15	1.31	2.54	1.08
Modern Myths About Sexual Aggression	1-7	4.68	1.28	2.47	1.30
Sexual Objectification	1-7	4.09	1.01	2.62	.98
Rape Proclivity[a]	1-7	1.45	1.00	1.13	.70

Note. N=202. *n* (Incel) = 20, *n* (non-Incel) = 182. *M* = Mean, *SD* = Standard Deviation.

[a] Three participants of the total group showed rape proclivity. All of them were identified as non-Incels.

Correlational Analysis

All correlation values and significance levels can be found in Table 2. For Hypothesis 1, the correlational analysis showed that general pornography usage and rape myths acceptance had a significant, weak relationship, $r(200) = .17$, $p = .014$. Moreover, general pornography consumption correlated moderately with sexual objectification of women, $r(200) = .27$, $p < .01$. Sexual frustration showed a moderate relationship with all three of the variables representing misogyny, namely with sexual objectification, $r(200) = .39$, $p < .01$, hostility towards women, $r(200) = .45$, $p < .01$ and rape myths, $r(200) = .43$, $p < .01$. There were no significant correlations between violent pornography usage and the misogynistic variables (Sexual Objectification, Hostility towards Women and Modern myths about sexual aggression).

For Hypothesis 2, only violent pornography usage had a weak positive correlation with rape proclivity, $r(200) = .17$, $p < .01$. The other variables, general pornography consumption and sexual frustration did not show significant relationships with rape proclivity.

Table 3

Descriptive Statistics and Correlations for Study Variables of the Total Group

Variable	*M*	*SD*	1	2	3	4	5	6
1. General Pornography	5.01	2.83	—					

	M	SD						
2. Violent Pornography	2.31	2.13	.48**	—				
3. Sexual Frustration	2.97	1.68	.22**	.12	—			
4. Hostility towards Women	2.70	1.21	.05	-.01	.45**	—		
5. Modern Myths About Sexual Aggression	2.69	1.45	.17*	.00	.43**	.75**	—	
6. Sexual Objectification	2.77	1.07	.27**	.04	.39**	.65**	.77**	—
7. Rape Proclivity	1.16	0.73	.13	.17**	-.01	.21**	.21**	.21**

Note. $N = 202$; M = Mean, SD = Standard Deviation. The scale range for variables 1. and 2. was 1-10. The scale range for variables 3. to 7. was 1-7.

*p < .05. **p < .01.

Regression analysis

For Hypothesis 1, the multiple regression analysis showed that for the hostility towards women scale, only sexual frustration was a significant predictor while general pornography usage and violent pornography usage did not predict hostility towards women (see Table 4). Similarly, only sexual frustration predicted acceptance of modern myths about sexual aggression (see Table 5). Moreover, both general pornography usage and sexual frustration were able to predict sexual objectification (see Table 6).

Finally, for Hypothesis 2, none of the variables predicted rape proclivity (Table 7).

Table 4

Regression analysis summary for Hostility Towards Women

Variable	B	SE B	β	t	p
General Pornography	.00	.03	.00	.05	.961
Violent Pornography	-.03	.04	-.06	-.74	.462
Sexual Frustration	.25	.05	.35	5.16	**<.001**

Note. Model Significance: $F(3, 198) = 9.226$, $p < .001$, $R^2 = .123$

Table 5

Regression analysis summary for Acceptance of Modern Myths Towards Rape

Variable	B	SE B	β	t	p
General Pornography	.07	.04	.14	1.912	.057
Violent Pornography	-.08	.05	-.12	-1.681	.094
Sexual Frustration	.36	.07	.42	6.409	**<.001**

Note. Model Significance: $F(3, 198) = 16.959$, $p < .001$, $R^2 = .204$

Table 7

Regression analysis summary for Rape Proclivity

Variable	B	SE B	β	t	p
General Pornography	.02	.02	.07	.808	.420
Violent Pornography	.05	.03	.15	1.829	.069
Sexual Frustration	-.02	.03	-.04	-.603	.547

Note. Model Significance: $F(3, 198) = 2.292$, $p = .079$, $R_2 = .12$

Table 6

Regression analysis summary for Sexual Objectification

Variable	B	SE B	β	t	p
General Pornography	.10	.03	.25	3.396	**.001**
Violent Pornography	-.06	04	-.12	-1.688	.093
Sexual Frustration	.23	.04	.35	5.377	**<.001**

Note. Model Significance: $F(3, 198) = 16.371$, $p < .001$, $R_2 = .199$

Based on the correlation analysis and the multiple regression analysis, Hypothesis 1 was partly accepted and Hypothesis 2 was rejected. Hypothesis 1 was partly supported, as general pornography consumption predicted sexual objectification of women and sexual frustration was positively related to all variables measuring misogyny (sexual objectification of women, hostility towards women and acceptance of modern myths about sexual aggression) and predicted them. Hypothesis 2 was rejected, as neither general pornography usage, violent pornography usage nor sexual frustration showed any predictive quality for rape proclivity.

Discussion

The aim of this study was to gain more insight into factors that might contribute to misogyny in society. Potential factors were extracted from the Incel community by examining its content and previous research on Incels. Three variables were determined that were deemed to be relevant in the emergence and perseverance of misogyny, namely general pornography usage, violent pornography usage and sexual frustration. It was assumed that these factors were also to be found in the normal population. The established relationships were tested in a mixed convenience sample of Incels and non-Incels.

The current study showed that sexual frustration seems to be an important factor in contributing to misogyny. It is suggested that a person with higher sexual frustration seems to be more likely to share modern myths about sexual aggression, be hostile towards women and sexually objectifying women. For this study, sexual frustration did not show a positive

relationship to rape proclivity. Moreover, the data indicates that a person with a higher general pornography usage has a higher tendency to sexually objectify women. Overall, violent pornography usage did not show the expected relationship to misogyny, as it was, for this study, not related to any measure of misogyny or rape proclivity. Furthermore, general pornography usage showed no positive relation to the acceptance of modern myths about sexual aggression, hostility towards women and rape proclivity.

Theoretical and Practical Implications

Some results of the current study were consistent with previous research, while other results disconfirmed some of the above hypothesized associations. The outcome of this study contradicts the findings of Hald, Malamuth and Yuen (2010), which indicated that pornography usage and violent pornography usage have a positive relationship to beliefs supporting violence against women. For this study, neither general pornography usage nor violent pornography usage showed this association. One suggested explanation for this contrasting finding is outlined by Ferguson and Hartley (2009). They argue that pornography usage itself does not cause rape or sexual aggression but affects people who are already predisposed to being sexually aggressive. Furthermore, general pornography usage was positively related to sexual objectification of women. This finding goes in line with the research conducted by Peter and Valkenburg (2009), who argued that pornography consumption has a strong positive relationship with the sexual objectification of women. These findings must not contrast the notions of Ferguson and Hartley (2009), as sexual objectification itself does not imply sexual aggression. Still, sexual objectification can be perceived as form of misogyny as it reduces women to their sexual attractiveness. In contrast, violent pornography usage was not related to sexual objectification of women. However, as only 14 participants showed high violent pornography usage, there could be a lack of data to accurately test this relationship. Furthermore, this study suggests that general pornography consumption only relates to sexual objectification of women but not to hostility towards women and acceptance of modern myths about sexual aggression. These results and the before outlined research by Ferguson and Hartley (2009), indicate that investigating pornography consumption as a single factor might not be the best approach to tackle misogyny. In relation to that, recent research argues that pornography usage might negatively affect people more who show other risk factors such as antisocial characteristics and a hostile social environment (Kingston, Malamuth, Fedoroff, & Marshall, 2009).

Overall, the outcomes of this study go in line with the previously established connections between sexual frustration and misogyny. These connections were mainly established by identifying sexual frustration as an overarching theme that may contribute to the high degree of misogynistic attitudes in the Incel community. For this study, a relationship between sexual frustration and misogynistic beliefs was also found in normal society. The predictive quality of sexual frustration on hostility towards women partly confirmed the frustration-aggression theory postulated by Berkowitz (1989), as the theory states that frustration can lead to anger and aggression (Grossarth-Maticek et al., 1989). However, only hostility towards women measured anger targeted against women, no measure of aggression was used in this study. As sexual frustration showed no predictive quality for rape proclivity, the current study could not confirm the suggestion of Kanin (1983), who indicated that sexual frustration is an important factor in contributing to rape. However, these results can also not disconfirm Kanins notion, as the current sample only included three participants that showed rape proclivity. Therefore, the sample lacked data to make valid claims about the relationship of sexual frustration and rape. Based on the above described findings, it is suggested that misogynistic attitudes are mainly driven by sexual frustration and that a person's usage of pornography may not affect his sexual frustration and consequently not his misogynistic beliefs.

For this study, it was suggested that Incels would show stronger misogynistic beliefs than non-Incels. This assumption was partly confirmed as Incels showed higher misogynistic attitudes, namely more hostility towards women, more acceptance of modern myths about sexual aggression and more sexual objectification of women than non-Incels. As indicated above, the sample was not suited to make valid claims about rape proclivity. These findings go in line with previous research, which outlined the high frequency of misogynistic content that is shared in the Incel community (Baele et al., 2019; Jaki et al., 2019).

The above outlined outcomes suggest practical implications in the context of lowering misogyny in society. As sexual frustration predicted misogynistic attitudes, it is expected that lowering sexual frustration will result in a decrease in misogynistic beliefs. Therefore, future interventions should target sexual frustration by trying to lower it. Interventions might try to reliably identify people who are sexually frustrated and tailor programs to this target group that tackles their frustration. For example, a possible intervention could try to increase the frustration tolerance of the target group. Moreover, as it is assumed that frustration is an unpleasant state of being, reducing the sexual frustration would also result in a decrease of suffering for the target group.

This study and previous research (Peter & Valkenburg, 2009) suggest that pornography usage is positively linked to the sexual objectification of women. Due to the high amount of adolescents who consume pornography (Peter & Valkenburg, 2016), policy makers should focus on educating adolescents on how to establish a responsible pornography consumption, in order to limit sexual objectification of women.

Strengths, Limitations and Future Research

One major strength of this study was testing sexual frustration as a potential factor driving misogynistic attitudes. No previous research known to the author has either tested or hypothesized this relationship before. The results of the current study indicate that sexual frustration is an important factor in contributing to misogynistic attitudes. This is a novel finding and adds new important insights to the current state of research on misogyny.

As indicated above, the initial aim of the study was to test a pure Incel sample. Due to difficulties in the recruitment process it was decided to widen the sample to the normal population. Still, in total 20 Incels were identified. This constitutes another strength of this study. No other research known to the author was able to directly reach Incels. Previous research based their claims about misogynistic characteristics of the Incel community on content and linguistic analyses. This study achieved to show that Incels share indeed more misogynistic attitudes compared to non-Incels by measuring these variables directly on Incels. This constitutes a novel finding in the realm of the Incel research.

One major limitation of this study was the inductive approach of extracting factors that may contribute to misogyny out of the Incel community. The factors that were used as variables to predict misogyny were loosely based on theories about Incels but more on investigating the content of the community and searching for overlaps with other literature on misogyny. Sexual frustration was chosen as an important variable because by reading and trying to grasp the nature of the community, it was deemed to be a central element of Incels. Relating sexual frustration to misogyny proposed a new theory and was not inherently backed up by scientific literature.

Another limitation of the study was the subsample size of 20 Incels. For the current research, Incels showed more misogynistic attitudes than non-Incels. However, the sample is not big enough to ensure a high degree of validity of these results. Consequently, no generalization can be made. It is not clear whether these results hold true for a wider sample of Incels. Moreover, during the initial approach of creating a pure Incel sample, the research team received negative and hostile feedback in online Incel communities where the study survey was

distributed. Therefore, it is assumed that the 20 Incels that participated in the study, might differ from other Incels as they seemed to be more open and willing to contribute to research. Due to these difficulties in the initial recruitment process, it is assumed that other Incels that are more hostile towards outsiders could score even higher on misogynistic measures than the Incels in this sample.

This leads to one of the recommendations for future research. If researchers want to recruit Incels for their study, they should not underestimate the time and effort this will take. It is assumed that Incels will be hostile and show mistrust towards researchers. One suggestion would be to take more time in trying to establish a connection to an Incel community. This could take the form of building a trustful relationship towards one of the hosts of the Incel forums. Winning a gatekeeper of the forum for the research and letting this person distribute the study in the belonging community is assumed to result in less hostile reactions, as the suggestion to participate in, for example a survey, comes out of the community itself. Furthermore, it is recommended that a male researcher tries to reach out to Incel communities, as it is expected that female researches will experience more negative reactions.

Based on the new finding that sexual frustration contributes to misogynistic attitudes, further research should investigate this relationship by verifying it in other samples. Moreover, it is assumed that a degree of people who are sexually frustrated will not share misogynistic attitudes. Psychological factors like frustration tolerance might mediate the relationship of sexual frustration and misogyny. Finding out what factors increase or decrease this relationship could provide new insights for future interventions targeting at lowering misogyny in society.

Conclusion

The aim of the present research was to investigate what factors are related to misogyny in society. The analysis of central elements in the Incel community and its overlap with previous research on misogyny led to the emergence of three possible factors assumed to influence misogyny in the normal population. These factors were general pornography usage, violent pornography usage and sexual frustration. They were tested in a mixed convenience sample which also included 20 Incels. Although the generality of the results must be established by future research, the current study has provided support for the importance of sexual frustration as a factor that contributes to misogynistic attitudes. It is suggested that a person who is sexually frustrated is more likely to be hostile towards women, accept modern myths about rape and sexually objectify women. Moreover, this study provided further empirical evidence for the positive relationship of general pornography usage and the sexual objectification of women.

Additionally, previous assumptions about Incels were confirmed by showing that Incels share stronger misogynistic views compared to non-Incels. It is recommended that future research focusses on investigating what factors contribute to sexual frustration in order to guide future interventions that aim to lower sexual frustration. Moreover, it is suggested to create a larger Incel sample, to verify the present results. It is hoped that this research was able to provide insights that might help in further eliminating misogyny.

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Appendix A
Sexual objectification

Sexual Reductionism Scale by Peter & Valkenburg (2007)

(Responses were measured on a 7-point Likert scale ranging from 1: strongly disagree to 7: strongly agree)

1. An attractive woman should expect sexual advances and should learn how to handle them.

2. Women should be more concerned about their appearance than men.

3. Using her body and looks is the best way for a woman to attract a man.

4. Women should spend a lot of time trying to be pretty; no one wants to date a woman who has "let herself go."

5. There's nothing wrong with men whistling at shapely women.

6. It bothers me when a man is interested in a woman only if she is pretty.

7. There is nothing wrong with men being primarily interested in a woman's body.

8. Being with an attractive woman gives a man prestige.

9. Unconsciously, girls always want to be persuaded to have sex.

10. Sexually active girls are more attractive partners.

Appendix B

Acceptance of modern myths about sexual aggression

Acceptance of Modern Myths about Sexual Aggression Scale by Gerger, Kley, Bohner and Siebler (2007)

(Responses were measured on a 7-point Likert scale ranging from 1: strongly disagree to 7: strongly agree)

1. As long as they don't go too far, suggestive remarks and allusions simply tell a woman that she is attractive.

2. It is a biological necessity for men to release sexual pressure from time to time.

3. Many women tend to misinterpret a well-meant gesture as a ''sexual assault''.

4. Interpreting harmless gestures as ''sexual harassment'' is a popular weapon in the battle of the sexes.

5. To get custody for their children, women often falsely accuse their ex-husband of a tendency toward sexual violence.

6. Many women tend to exaggerate the problem of male violence.

7. Women often accuse their husbands of marital rape just to retaliate for a failed relationship.

8. The discussion about sexual harassment on the job has mainly resulted in many a harmless behavior being misinterpreted as harassment.

9. When a woman starts a relationship with a man, she must be aware that the man will assert his right to have sex.

10. A lot of women strongly complain about sexual infringements for no real reason, just to appear emancipated.

11. Women like to play coy. This does not mean that they do not want sex.

Appendix C

Hostility towards women

Hostility Toward Women Scale by Check (1985)

(Responses were measured on a 7-point Likert scale ranging from 1: strongly disagree to 7: strongly agree)

1. I feel that many times women flirt with men just to tease them or hurt them.

2. I believe that most women tell the truth.

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

4. I think that most women would lie just to get ahead.

5. Generally, it is safer not to trust women.

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

7. I am easily angered by (other) women.

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

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

10. (Other) Women are responsible for most of my troubles.

Appendix D
Rape Proclivity

Likelihood of Rape Measure by Malamuth (1981)

(Responses were measured on a 7-point Likert scale ranging from 1: strongly disagree to 7: strongly agree)

1. I would rape someone if I know that I would not be caught and/or punished.

Appendix E

Sexual frustration

Sexual Frustration Scale by Gizzarelli & Scott (1994)

(Responses were measured on a 7-point Likert scale ranging from 1: strongly disagree to 7: strongly agree)

1. I am often sexually frustrated.

2. Quite often I would like to have sex, but I cannot.

3. I am often sexually aroused, but there is no one to have sex with.

4. I don't have sex as often as I would like to.

5. I am often frustrated about not being able to find someone to have sex with.

Appendix F
General and violent pornography usage

(Responses were measured on a 10-point Likert scale: (1) 1-2 times (2) 3-5 times (3) about once a month (4) 2-3 times a month (5) about once a week (6) 2 - 3 times a week (7) 4 - 6 times a week (8) about once a day (9) several times a day (10))

Definition of pornography:
Content that depicts female nudity and/or graphic sexual acts involving females such as intercourse or oral sex.

Definition of violent pornography:
Content that depicts sex without consent, with coercive acts, or with aggressive

Please indicate what applies to you.
How many times in the past 6 months have you viewed pornography?
How many times in the past 6 months have you viewed violent pornography?

Appendix G

Informed consent and additional information about the study

PROJECT TITLE: People's Perceived Motives, Attitudes and Relationship Preferences

INVESTIGATORS: Dr. Pelin Gül, Department of Psychology, Health, and Technology, University of Twente, Netherlands.

PURPOSE

This study investigates people's perceived motives, attitudes and preferences in relationships. We kindly ask you to participate in this study, as we are trying to understand these mechanisms in a diverse group of individuals. We aim to deepen our understanding of the impact that underlying cognitions and emotions can have on different behaviours and formations of relationships among people. **This survey is only open to participants who are 18+ years old.**

PROCEDURES

If you agree to participate, you will be asked general demographics questions (age, sex, sexual orientation, nationality, etc.). Following this, you will be asked with a number of questions about where you stand regarding sexual/romantic relationships, your attitudes towards sex, past sexual behaviour, sexual fantasies, pornography consumption, your attitudes and perceptions of women, and relationships between men and women. You will also be asked questions about your personality. It is important to keep in mind that there are no right or wrong answers. We are interested in the attitudes and experiences of individuals. Therefore, our research relies on your own honest opinion. At the end of the survey, you will be provided with more details about this study. You will also have a chance to enter your email address if you would like to be considered in a **€50 raffle for an Amazon voucher for those who complete the survey.** Your participation will last approximately **20 minutes**. People who participate via SONA Systems will be compensated with **0.5 credits.**

PARTICIPANT RIGHTS

Your participation in this study is completely voluntary. You are free to decline to participate, refuse to answer any individual questions, or withdraw from the study at any time without the need to give any reason.

RISKS AND BENEFITS

There are no known or anticipated risks associated with this study. Although this study will not benefit you personally, we hope that our results will add to the knowledge about how people's emotions can influence their attitudes and decisions.

CONFIDENTIALITY

Your responses are completely anonymous, and cannot be traced back to you because no personally identifying information such as names is asked in this survey. The information you provide will not be disclosed to third parties, and they will be aggregated with the responses of other participants and examined for hypothesized patterns. Your anonymous responses will be used for scientific research into various aspects of personality and social psychology and will be published.

QUESTIONS

For further information about this study, you may contact **Dr. Pelin Gül, p.gul@utwente.nl**, the person in charge of this research study.

If you would like to talk with someone other than the researchers to discuss problems or concerns, to discuss situations in the event that a member of the research team is not available, or to discuss your rights as a research participant, 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.

CONSENT AND AUTHORIZATION PROVISIONS

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

Clicking **"I agree and consent to participating in this study"** indicates that you have been informed about the nature and method of this research in a manner which is clear to you, you have been given the time to read the page, and that you voluntarily agree to participate in this study.

Appendix H

Demographic questions

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

How old are you?

_____

What is your sex?

Female

Male

Other / prefer not to say

What is your country of birth?

China

India

United States

Canada

United Kingdom

Germany

Netherlands

Other, please indicate: _____

What is your ethnicity?

White - European

White - American

White - UK/Irish

White - Other

Black - Caribbean

Black - African

Black - Other

Hispanic/Latino

Native American/Native Hawaiian/Alaskan Native

Indian

Pakistani

Bangladeshi

Chinese

Asian - Other

Mixed Race

Prefer not to say

What is your sexual orientation?

Heterosexual

Homosexual

Bisexual

Transsexual

Asexual

Other / Prefer not to say

What is the highest level of education you have completed?

Less than high school

High school graduate

College graduate

Undergraduate degree

Master's degree

PhD or higher level degree

What is your current employment status?

Student

Employed full-time (32+ hrs a week)

Employed part-time (less than 32 hrs per week)

Unemployed (currently looking for work)

Unemployed (currently not looking for work)

Retired

Self-employed

What is your socio-economic status?

very poor 1

2

3

middle class 4

5

6

very wealthy 7

What describes your current relationship status best?

I'm currently not in a relationship or dating

Casually dating

Exclusively dating

Living together/ engaged/ married

Appendix I
Incel identification

Do you identify as an Incel?

Yes

No

Incels (a term derived from "involuntary celibates") are members of an online subculture who define themselves as unable to find a romantic or sexual partner despite desiring one, a state they describe as inceldom.

Appendix J
Debriefing Information

Thank you very much for participating in our study!

Precisely, our study investigates how one's degree of involuntary celibacy is related to their personality, mental health, various motives, attitudes and perceptions of women and male-female relationships.

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 the questions asked during the study can invalidate the results. We greatly appreciate your cooperation.

For further information about this study, you may contact **Dr. Pelin Gül, p.gul@utwente.nl**, the person 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, pleasecontact the **Counseling centre at the University of Twente at +31 53 489 2035.** Thanks again for your participation.