

Involuntary Celibacy: Personality Traits Amongst Misogynistic Online Communities

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Bachelors Thesis

Submitted to the Department of Positive Psychology and Technology
Faculty of Behavioural, Management and Social Sciences
At the University of Twente

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Abstract

In the present study, the strength of misogynistic views and personality traits of involuntary celibates (Incels) were explored. An online survey was distributed in social media and across various Incel forums. Participants ($N = 208$) were administered the extra-short form of the Big Five personality test, the BFI-2-XS (Soto & John, 2017), the Hostility Towards Women Scale (Check, 1985) and the Ingroup Ties Scale (Cameron, 2004). Three scales, Incel Status, Incel Forum Activity and a Level of Inceldom scale were developed by the researchers, in order to measure participants' relative level of Inceldom and their associated online activity. Participants included 20 self-identified Incels and 103 associated Incels (Individuals scoring high on Inceldom scale). It was hypothesised that Incels significantly differ in their personality traits from non-Incels and that their personality relates to their level of Inceldom, Incel identification, use of online Incel forums and strength of misogynistic views. Results of independent sample *t*-tests, Pearson correlations and multiple regression analyses suggest that Incels certainly differ in their misogyny levels and personality: Self-identified Incels showed significantly stronger misogynistic views, lower extraversion, lower agreeableness and higher neuroticism than non-Incels. Furthermore, a high level of Inceldom was correlated with low conscientiousness, low extraversion, low agreeableness and high neuroticism. Agreeableness and neuroticism were found to be the most predominant personality traits linked to involuntary celibacy. However, limitations of this study must be taken into account when examining the results, such as the small sample size of self-identified Incels. Nevertheless, this study introduces psychological insight into one of the new online communities in this century. With more extensive knowledge about the personality and attitudes of these members, one might be able to contribute towards interventions designed to reduce misogyny online and in the physical world.

Keywords: Misogyny, Involuntary Celibacy, Personality Traits, BFI-2-XS, Big Five

Incels, or involuntary celibates, are members of a misogynistic online subculture that describe themselves as being unable to find a romantic partner despite the desire of having one (Jaki et al., 2019). Their hatred against women and sexually active men stems from their belief that they are entitled to sex with women. The Incel community usually blames women for choosing “alpha males”, men that appear to be strong, attractive, confident and desired by women, over them and denying their rights to be sexually active (Young, 2019).

Incels came to public attention when terrorist attacks appeared to be linked to their ideology by a series of mass murders in recent years. What distinguishes the Incel community from other hate groups, is that their activity was only possible due to the rise of social media (Young, 2019). Not only does this raise questions about the unlimited possibility to engage in online hate but also makes this group relatively uncontrollable in the expanding online world. Thus, it is vital to understand which underlying reasons lead Incels to engage in hate online. To this end, this paper aims to understand which individuals are more prone to become involuntary celibates, based on their personality characteristics. With this insight, it might be possible to recognise predisposed Incels early on and to prevent them from forming a radical ideology.

Incels usually turn to specific Incel forums to vent their frustration and find support. Over time, these websites became more filled with users, who are men’s rights activists, hold extremist views or are misogynistic (Young, 2019). Thus, most Incel websites and subreddits are being removed due to violation of the rules and codes of conduct of these websites (Farrell et al., 2019). However, until this day, the number of users describing themselves as Incel and so-called “Femcel”, the female version of Incels, is steadily increasing, despite the attempts to contain the community and its online hatred (Farrell et al., 2019).

Besides the hate displayed online, Incels seem to have shown increased aggression in the real world. Several violent attacks and mass killings, also called “rejection killings” have been associated with the Incel’s sexist ideology (Young, 2019). In 2014, 22-year old Elliot Rodger killed six people at the UCLA campus, after posting a video online complaining about being rejected by women. Inspired by him, Alek Minassian, a 25-year-old Incel, killed ten people by driving into pedestrians in 2018 (Jaki et al., 2019). These, most often radicalised Incels, are being praised and idolised by the online community after their crime, sometimes even called “hERoes”, with Elliot Rodger’s initials capitalised (Baele et al., 2019).

The underlying reasons for joining these misogynistic communities online and, especially, committing acts of violence, is still in debate. Some researchers have claimed that Incels might experience a higher masculinity threat (Scaptura & Boyle, 2019) or have a general tendency to victimise themselves (Baele et al., 2019). Other studies have argued, sexual

frustration or mental illnesses would make Incels more vulnerable towards hate groups and extremist ideologies (Jaki et al., 2019; Young, 2019).

Incels and Misogyny

Even though violent and misogynistic attitudes are defining characteristics of this community, part of the Incel community also does not support violence or hatred against women (Scaptura & Boyle, 2019). Some Incels attempt to distance themselves from the toxic community by not tolerating violence in their support group. Thus, a generalisation of Incels being violent must be handled with caution. However, most research has found sound evidence on Incels' misogynistic tendencies, linking sexual violence as well as physical violence and anti-feminism to Incel forums (Baele et al., 2019; Farrell et al., 2019). Particularly, feelings of rejection and unattractiveness were found to elicit hate towards women, whether they were active members of the Incel community or not (Scaptura & Boyle, 2019). Failed attempts at relationships and the chronic stress of rejection were theorised to trigger misogyny (Scaptura & Boyle, 2019).

Incels and Personality

Particular personality characteristics might make it more likely for an individual to identify as an Incel. Difficulties in attracting or keeping a partner and increased frustration due to continuous rejection could lead one to turn to misogynistic Incel forums (Donnelly et al., 2001; Scaptura & Boyle, 2019). Research suggests that personality affects the relationship status stronger than it does vice versa (Neyer & Asendorpf, 2001), thus indicating that Incels' specific personality traits might lead them towards staying single and sexually inexperienced.

Furthermore, some personality traits seem to be strongly correlated with prejudice and hate towards women (Christopher et al., 2013; Ekehammar & Akrami, 2007). Primarily, the Big Five personality traits have previously been investigated as being a predictor for misogynistic beliefs (Christopher et al., 2013; Sharpe & Desai, 2001). The Big Five personality traits or "OCEAN" model measures basic personality traits on five scales (i.e. Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism) and is commonly used in clinical assessments and psychopathology (Sharpe & Desai, 2001). The Big Five model shows high reliability, great validity and allows to identify a wide range of individual differences, and, therefore, prevails over other personality inventories (McPherson, 2019).

Openness is the tendency to be open towards change and new experiences. Low scores on openness seem to be correlated with a lack of romantic encounters (Schmitt & Shackelford, 2008). Individuals with low openness tend to show fewer mating attempts and lower willingness to engage in new sexual experiences, therefore, might be less likely to find a

partner. (Bobowicz, 1997; Schmitt & Shackelford, 2008). Also, more open individuals tend to be riskier, more impulsive and sensation-seeking when it comes to dating (Jia et al., 2016). Besides, openness was found to be negatively correlated with prejudice against women and sexism (Ekehammar & Akrami, 2007; McPherson, 2019): Open-minded individuals tend to be less conservative, more non-confirmatory and prone towards more liberal political values (Ekehammar & Akrami, 2007).

Conscientiousness is a trait which demonstrates being organised, having self-control and perseverance. The relationship between conscientiousness and sexual experience has not been widely investigated in previous research. However, a low score on conscientiousness may be linked to the inability to satisfy relationship demands (Jia et al., 2016). When it comes to misogyny, research suggests a negative relationship between aggression towards women and the trait (Miller et al., 2008; Sharpe & Desai, 2001). These results indicate that individuals scoring high on conscientiousness would show less violence because they might be more able to control impulsive behaviours better (Miller et al., 2008; Schmitt & Shackelford, 2008).

Extraversion is characterised by an outgoing or energetic personality, whereas introverted individuals seem to be more reserved. Inceldom and low extraversion were suggested to be associated in previous research (Donnelly et al., 2001; Jaki et al., 2019; Young, 2019), due to Incels' apparent lack of social skills and confidence. Extraversion was found to be an essential factor contributing to dating success since low levels could be a barrier to developing and maintaining relationships (Donnelly et al., 2001). Apart from that, several studies have also claimed extraversion to be low in prejudiced individuals (Ekehammar & Akrami, 2007; Jaki et al., 2019; Sharpe & Desai, 2001): Extraverted people tend to form closer attachments to strangers, which might cause them to form prejudices against others less likely (Ekehammar & Akrami, 2007).

The trait of agreeableness indicates concern for others, social harmony and high levels of trust. Agreeableness seems to be correlated with the experience of sexual activity and relationship satisfaction (Bobowicz, 1997; Bourdage et al., 2007). Individuals who score high on agreeableness are more likely to be perceived as caring and compassionate, which could contribute to dating success (Bourdage et al., 2007; Jia et al., 2016). Besides, misogynistic individuals tend to have low agreeableness, since trusting people usually implies the belief that others are well-intentioned. Distrust of other's intentions tends to indicate hostility and sexism (Christopher et al., 2013; Hald & Malamuth, 2015; McPherson, 2019).

Lastly, neuroticism represents the emotional stability of an individual. High neuroticism suggests a tendency to experience negative emotions like jealousy and loneliness. Recent

research suggests that Incels would score high in neuroticism since they tend to show increased frustration and anger (Donnelly et al., 2001; Scaptura & Boyle, 2019). Negative feelings might impede the process of finding a partner and being involved in relationships because of continuously being suspicious towards potential mates (Bobowicz, 1997; Donnelly et al., 2001). Lastly, neuroticism also seems to be a predictor for hostility as well as misogyny (Goldberg, 1972; Sharpe & Desai, 2001): Individuals, who score high on neuroticism, tend to be more defensive in their shortcomings and more impulsive (Ekehammar & Akrami, 2007; Goldberg, 1972).

Notably, specific personality characteristics might make it more likely for an individual to identify as an Incel. Due to Incels' apparent failure to attract a romantic partner, even though desiring one, a particular personality type for Incels seems to be more likely. Also, based on Incels' apparent misogyny level, one could expect certain personality trends. Suggested by recent literature, Incels would show low openness to experience, low conscientiousness, low extraversion, low agreeableness and high neuroticism on the Big Five personality dimensions.

The present study

Apart from the studies on dating success, there has been no extensive research on Inceldom, due to its novelty. To date, no research has empirically examined potential reasons for individuals' identification with the Incel community, their use of online Incel forums and the strength of their misogynistic views. It is essential to understand the underlying psychological reasons and personality characteristics of individuals joining the Incel subculture, in order to intervene before the ideology manifests into actual violence towards the society. Insights about the personality characteristics of Incels can inform potential intervention aimed at reducing misogyny and hostility towards women in society.

The present study aims to fill this gap of research by contributing towards some form of psychological assessment of Incels and predicting which individuals, based on their personality traits, are most likely to identify with the Incel community. First, the degree of misogynistic attitudes of Incels and non-Incels will be investigated. Second, the differences between the personality traits of Incels and non-Incels will be examined. Next to these comparative questions, this study will explore whether specific personality traits predict individuals' identification with the Incel community, their use of online Incel forums, and the strength of their misogynistic views. Based on the discussion above, the following hypotheses have been established:

First, Incels are expected to have higher misogynistic views than non-Incels (H1). Second, Incels are expected to have lower openness (H2a), lower conscientiousness (H2b), lower extraversion (H2c), lower agreeableness (H2d), and higher neuroticism (H2e) than non-Incels. Third, level of Inceldom (H3a), Incel identification (H3b), Incel forum reading (H3c), Incel forum posting (H3d), and misogynistic views (H3e) are expected to be related to lower openness, lower conscientiousness, lower extraversion, lower agreeableness and higher neuroticism.

Method

Participants

Participants consisted of 208 social media users between 18 and 65 years ($M = 24.77$, $SD = 6.99$). Responses were taken out when participants were below 18 years of age, completed less than two items on a scale or failed more than one attention check. Thus, 106 participants were excluded from the original sample ($N = 314$). Only sample statistics of the included responses are reported here. Furthermore, while participants were able to identify themselves as Incel, all participants also scored either high- or low- on Incel related characteristics. Hence, it was possible to conduct analyses with two different samples. Information on which sample was used for which analysis can be found in Table 1. A full overview of the demographics of the respondents can be found in Tables 2a and 2b.

Table 1

Incel sample sizes and genders ($N = 208$)

	Comparative Analysis		Correlational Analysis	
	Non-Incel $n = 188$	Incel $n = 20$	Low Incel $n = 105$	High Incel $n = 103$
Female	122	2	74	50
Male	62	18	28	52
Other	4	0	3	1

Table 2a

Demographic Characteristics of the Respondents (N = 208)

Variables		Frequency	%
Gender			
	Female	124	59.6
	Male	80	38.5
	Other	4	1.9
Nationality			
	German	68	32.7
	U.S.	53	25.5
	Dutch	31	14.9
	UK	14	6.7
	Canada	8	3.8
	Other	34	16.4
Ethnicity			
	White	181	86.9
	Mixed Race	8	3.8
	Black	5	2.4
	Asian	5	2.4
	Hispanic	2	1.4
	Other	7	3.3
Sexual Orientation			
	Heterosexual	135	64.9
	Bisexual	54	26
	Homosexual	11	5.3
	Asexual	4	1.9
	Other	4	1.9
Highest Educational Level			
	High School	101	48.6
	Undergraduate	82	39.4
	Postgraduate	18	8.7
	Less than High School	6	2.9
	PhD or higher	1	.5

Table 2b

Demographic Characteristics of the Respondents (N = 208)

Variables	Frequency	%
Employment Status		
Student	116	55.8
Employed fulltime (>32 hrs)	50	24.0
Unemployed	20	9.6
Employed part-time (<32 hrs)	13	6.3
Unable to work	5	2.4
Self-employed	3	1.4
Retired	1	.5
SES		
Middle Class	97	46.6
Lower than Middle Class	56	27.4
Higher than Middle Class	54	26
Relationship Status		
Single	85	40.9
Exclusively dating	57	27.4
Engaged/Married	45	21.6
Casually dating	21	10.1

Procedure and Design

This cross-sectional study was conducted during April and May 2020. Participation in this study was voluntary. An invitation to participate and the link to the survey was distributed in several Incel subreddits after the moderators of these subreddits granted permission. In order to establish a comparison group of non-Incels, the survey was also posted on the SONA-system of the University of Twente and student Facebook groups. Participants were informed that the questionnaire measures motives and attitudes towards interpersonal relationships. First, informed consent forms were used, containing information about the procedures, participants rights, risk and benefits of participation and confidentiality in the research. After collecting participants' demographics, a short briefing about the definition of an Incel was displayed. The description was kept as neutral and objective as possible. Thus,

participants, unknown to the term, were introduced the topic, and an identical operationalisation was established.

Afterwards, participants completed the Incel scales, personality scales and misogyny scales. Because the Incel items were measured on scales ranging from, for example, 1-10, it was possible for all participants to respond, even though they did not identify as an Incel. After participants completed all scales, the purpose of the study (the relation between one's degree of involuntary celibacy, personality and perception of women) was disclosed. Then, participants were thanked and asked for optional contact details. Compensation in the form of a chance to win a 50€ amazon voucher for the forum users and 0.5 subject points for the university students from the University of Twente was provided.

Materials

This study was part of a larger research project, investigating motives and mental health characteristics of Incels. Thus, the survey included a variety of other measures and instruments that are not relevant to this study. Here only the measures and scales that are relevant to the current study are presented. Three scales (Incel status, Incel forum activity and level of Inceldom) were developed by the researchers involved in the Incel project. All scales in the questionnaire, except for the demographics, informed consent and Incel scales, were randomly ordered. Also, each item within all scales was randomly displayed in order to account for order effects. Three attention checks were randomly included in the questionnaire. All questions were designed gender-neutral, so all genders were able to answer each scale. The study protocol and all instruments were approved by the Ethics Committee of the University of Twente BMS faculty.

Demographic questions

The survey asked for basic demographic information such as age, gender, country of birth, ethnicity, sexual orientation, level of education, employment status, socio-economic and relationship status.

Incel Status

One item was developed in order to assess whether participants self-identify as an Incel. The item "Do you identify as an Incel?" was presented with a binary choice option (Yes/No).

Incel Forum Activity

In order to assess if participants are members of an Incel online group and how active they are on these forums, three items were developed. First, it was examined whether the participants are members of an Incel group (Yes/No). Afterwards, the following items measured to what extent the respondents read posts on Incel forums ("How frequently do you log in to

check or read the discussions on the Incel forums/groups?”) and how often they post on these groups (“How frequently do you log in to post on the Incel forums/groups?”). Both items were measured on a 10-point Likert scale (1-I never post on the forums/groups to 10-more than 5 times a day). Because the two items did not correlate highly, the two items (reading and posting) were analysed separately.

Level of Inceldom

12 items were developed, in order to expand the sample size of Incels by classifying an individuals’ relative level of Inceldom (low to high). Thus, we were also able to classify Incels even though they did not identify as an Incel themselves. The scale included common characteristics of involuntary celibacy, for example, a lack of romantic relationships and sexual experience, despite desiring these. The level of Inceldom scale was measured on a five-point Likert scale (1-Does not describe me to 5-Describes me extremely well). Examples of the level of Inceldom item are “I want to date, but nobody wants to date me.” and “I have tried having sexual/romantic relationships, but I have been rejected too many times.”.

Additionally, an explorative factor analysis was conducted in order to access the scale’s preliminary construct validity (see Appendix E for factor matrix). After removing four items, reducing the scale to a total of eight items, all items loaded under a single factor with loadings above .60. The scale was constructed by averaging all items scores. Reliability statistics of the final scale were analysed and resulted in a Cronbach’s alpha of .91, showing high internal consistency. In order to classify Incels in the sample by using the scale, a dichotomous measure of low- and high-Incels was established by averaging the data and using the median as the cut-off score. Individuals scoring above the median were labelled “associated Incel” in this study.

Identification with Incels

In order to measure the Identification with Incels, the Ingroup Ties Scale was used. This scale is part of the Social Identity Scale by Cameron (2004), which also measures the concepts of centrality (the subjective importance of the group) and ingroup affect. Only the Ingroup Ties items were used because only the identification with the Incel community was intended to be measured. The five items of the scale were assessed on a six-point Likert scale (1-strongly disagree to 6-strongly agree). An example of an item on the scale is “I have a lot common with other Incels.”. The identification scale was constructed by averaging all items scores and showed good reliability (Cronbach’s alpha of .75).

Misogyny

The 10-item Hostility Towards Women Scale (Check, 1985) was used to detect the level of misogyny. All items could be answered on a seven-point Likert scale (1-strongly disagree to

7-strongly agree). An example of an item on the scale is “Generally, it is safer not to trust women.”. The misogyny scale was established by averaging all items scores. The scale yielded a Cronbach’s alpha of .90.

Personality Scales

The Extra-Short Big Five Personality Scale (BFI-2-XS) by Soto and John (2017) was used to assess participants’ personalities. This version of the personality scale measures with 15 items and a five-point Likert scale (1-strongly disagree to 5-strongly agree) the Big Five personality traits. Each trait was measured with three items, and one item within each trait was reversed-coded. A typical item in the test would be “I am someone who is original, comes up with new ideas.” (measures openness; $\alpha = .58$), “I am someone who is reliable, can always be counted on.” (measures conscientiousness; $\alpha = .62$), “I am someone who is full of energy.” (measures extraversion; $\alpha = .66$), “I am someone, who assumes the best about people.” (measures agreeableness; $\alpha = .52$), and “I am someone who worries a lot.” (measures neuroticism; $\alpha = .70$). These are rather low reliability scores. However, the original scale by Soto and John (2017) did produce similar reliability results, therefore, the scales were created nonetheless. The scales were constructed by averaging the items scores on each trait.

Data Analysis

The data was analysed using SPSS version 26. In order to examine the sample characteristics, descriptive statistics and frequencies were computed on the demographic variable. To test hypotheses 1, and 2a to 2e, concerning the differences in misogyny and personality between Incels and non-Incels, independent samples *t*-tests were conducted with the self-identifying Incels (Incel status: yes vs no) and associated Incels (level of Inceldom: high vs low) as independent variables, and the personality traits and misogyny as dependent variables.

In order to test hypothesis 3a to 3e, concerning the relationship of Incel characteristics towards specific personality traits and misogynistic views, Pearson correlations were conducted with the variables: Incel status, level of Inceldom, Incel identification, Incel forum activity (posting and reading), misogynistic views and all five personality traits. Additionally, multiple regression analyses were conducted with the five personality traits as predictors and the variables level of Inceldom, Incel identification, and misogynistic views as outcome variables. Due to the small sample sizes and low power of Incel forum reading and posting ($n = 20$), multiple regressions were not conducted with these outcome variables. A significance level of $p < .05$ was needed in order to be considered significant.

Results

Descriptive Statistics

For the variables of level of Inceldom, Incel identification, Incel forum activity (reading and posting), misogyny, and all personality traits, the scales were averaged, and means and standard deviations were calculated (Table 3).

Table 3

Descriptive statistics

	Scale Range	Mean	Standard Deviation
Level of Inceldom	1 - 5	1.55	.84
Incel Identification	1 – 6	2.26	.95
Incel Forum Activity ₁			
Reading	1 – 10	7.71	1.68
Posting	1 – 10	4.14	3.17
Misogyny	1 – 7	2.71	1.21
Openness	1 – 5	4.02	.77
Conscientiousness	1 – 5	3.11	.91
Extraversion	1 – 5	2.94	.98
Agreeableness	1 – 5	3.56	.82
Neuroticism	1 – 5	3.21	1.01

Note. $N = 208$, ₁ $n = 21$

Comparative Analysis

In an independent *t*-test, self-identifying Incels were found to have significantly stronger misogynistic views, lower extraversion, lower agreeableness and higher neuroticism than non-Incels (Table 4). However, the imbalance of the sample size (188 non-Incels to 20 Incels) must be taken into account, when interpreting these results. Incels did not show significantly lower openness or lower conscientiousness, as initially predicted. Hence, based on this sample of self-identifying Incels and non-Incels, hypotheses 1, 2c, 2d and 2e were supported, whereas hypotheses 2a and 2b were not supported.

Table 4

t-test statistics for self-identified Incels

Variable	non-Incel		Incel		<i>t</i> (206)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Misogyny	2.56	1.10	4.15	1.31	6.05	<.001
Openness	4.02	.77	4.00	.72	-.98	.922
Conscientiousness	3.14	.90	2.83	.96	-1.44	.151
Extraversion	3.00	.96	2.50	1.01	-2.23	.027
Agreeableness	3.62	.79	3.03	.94	-3.09	.002
Neuroticism	3.16	1.00	3.65	.99	2.07	.040

Note. *M* = Mean, *SD* = Standard Deviation; *n* (non-Incel) = 188, *n* (Incel) = 20

Next, the results were also investigated based on participants' level of Inceldom (high Incels vs low Incels) (Table 5). An independent *t*-test revealed that there is a significant difference between high-Incels (scoring high on the level of Inceldom scale) and low-Incels in their misogynistic views and extraversion scores. Therefore, based on the sample of high- vs low- Incels, hypotheses 1 and 2c were supported, whereas hypotheses 2a, 2b, 2d and 2e, were not supported.

Table 5

t-test statistics for associated Incels

Variable	Low-Incel		High-Incel		<i>t</i> (206)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Misogyny	2.41	.75	3.02	1.31	3.76	<.001
Openness	4.05	.75	3.98	.78	-.72	.472
Conscientiousness	3.21	.90	3.01	.91	-1.59	.113
Extraversion	3.10	.93	2.81	.99	-2.12	.035
Agreeableness	3.63	.80	3.49	.84	-1.29	.198
Neuroticism	3.09	1.03	3.33	.98	1.775	.077

Note. *M* = Mean, *SD* = Standard Deviation; *n* (Low-Incel) = 105, *n* (High-Incel) = 103

Correlational Analysis

Level of Inceldom was found to be significantly related to lower conscientiousness, lower extraversion, lower agreeableness, and higher neuroticism (a full overview of correlation coefficients and significance levels are given in Table 6). Hence, hypothesis 3a was only supported with regards to these personality traits. Incel identification was significantly related to lower openness and lower extraversion. Hence, hypothesis 3b was only supported regarding these two traits. Incel forum posting was strongly and significantly related to lower agreeableness. Hence, hypothesis 3d was only supported with regards to agreeableness. Misogynistic views were significantly related to lower openness, lower extraversion and lower agreeableness. Agreeableness showed the strongest relationship towards misogyny among those traits. Hence, hypothesis 3e was only supported regards to openness, extraversion and agreeableness. Hypothesis 3c was not supported.

Table 6

Pearson correlations

	1	2	3	4	5	6	7	8	9	10
1. Level of Inceldom	-									
2. Incel Identification	.43***	-								
3. Incel Forum Activity: Reading	.25	.64**	-							
4. Incel Forum Activity: Posting	.13	.38	.46*	-						
5. Misogyny	.42***	.40***	.06	.05	-					
6. Openness	-.09	-.21**	.14	-.03	-.22**	-				
7. Conscientiousness	-.16*	-.04	-.01	-.39	-.06	.06	-			
8. Extraversion	-.21**	-.14*	-.30	-.29	-.15*	.26***	.38***	-		
9. Agreeableness	-.19**	-.11	-.29	-.55**	-.48***	.14*	.22**	.23**	-	
10. Neuroticism	.22**	.07	.30	-.02	.12	-.07	-.45***	-.44***	-.19**	-

Note. $N = 208$ Correlation significant at * $p < .05$. ** $p < .01$. *** $p < .001$. (Sig. 2-tailed)

Regression Analysis

Results of the multiple regression analyses indicated that the model with all personality traits was significant for the variables level of Inceldom, Incel identification and misogyny. However, the level of Inceldom was predicted by none of the personality traits (Table 7). Nevertheless, based on the beta coefficients, agreeableness and neuroticism showed the strongest effect on the level of Inceldom. Incel identification was predicted by low openness, which was also the strongest predictor in the model (Table 8). Misogynistic views were predicted by low scores on openness and agreeableness (Table 9). Agreeableness was a particularly strong predictor in this model. Hence, hypotheses 3b and 3e were only partially supported: 3b was supported regarding openness, and 3e was supported regarding openness and agreeableness. Hypotheses 3a, 3c, and 3d were not supported regarding any of the outcome variables.

Table 7

Regression analysis summary for level of Inceldom

Variable	B	Std. Error	Beta	t	p
Openness	-.04	.08	-.04	-.50	.617
Conscientiousness	-.04	.07	-.04	-.53	.597
Extraversion	-.09	.07	-.10	-1.28	.201
Agreeableness	-.13	.07	-.13	-1.80	.073
Neuroticism	.11	.07	.13	1.60	.110

Note. Model Significance: $F(5, 202) = 3.659$, $p = .003$, $R^2 = .083$

Table 8

Regression analysis summary for Incel identification

Variable	B	Std. Error	Beta	t	p
Openness	-.23	.09	-.18	-2.55	.011
Conscientiousness	.02	.08	.02	.30	.765
Extraversion	-.08	.08	-.08	-1.00	.332
Agreeableness	-.08	.08	-.07	-1.01	.314
Neuroticism	.02	.08	.02	.25	.806

Note. Model Significance: $F(5, 202) = 2.499$, $p < .032$, $R^2 = .058$

Table 9

Regression analysis summary for Misogyny

Variable	B	Std. Error	Beta	t	p
Openness	-.24	.10	-.15	-2.44	.016
Conscientiousness	.11	.09	.08	1.20	.232
Extraversion	-.01	.09	-.01	-.12	.905
Agreeableness	-.69	.09	-.46	-7.31	<.001
Neuroticism	.07	.09	.06	.80	.425

Note. Model Significance: $F(5, 202) = 14.151, p < .001, R^2 = .259$

Discussion

The aim of this study was to reduce the gap in Incel research by investigating differences in personality traits and misogyny between Incels and non-Incels, whether Inceldom is related to certain personality traits and if specific personality traits can predict Incel related characteristics. By understanding the personality types which are more prone to become involuntary celibate and, thus, interact with the Incel community online, one might be able to design possible interventions to prevent hate online and reduce hostility towards women indirectly.

The results of this study suggest that Incels certainly differ from non-Incels in their misogyny levels and personality traits. Incels showed stronger misogynistic views, lower extraversion, lower agreeableness and also higher neuroticism compared to non-Incels. Furthermore, involuntary celibacy was associated with all Big Five personality traits, including low openness, low conscientiousness, low extraversion, low agreeableness and high neuroticism. The traits of agreeableness and neuroticism demonstrated the strongest effect on involuntary celibacy, whereas individuals' misogynistic views were mostly affected by their openness and agreeableness.

Theoretical and Practical Implications

The findings for personality traits were throughout consistent with previous research, showing expected relationships towards dating success, hence Inceldom, and misogyny. It was discovered that individuals with a higher level of Inceldom tend to score particularly low on agreeableness. Individuals with low agreeableness may have a harder time to trust others and open up emotionally, thus might miss opportunities to build intimacy. Previous research has

suggested agreeableness to be the most significant personality trait when it comes to success in romantic relationships (Jia et al., 2016; Schmitt & Buss, 2000; Urbaniak & Kilmann, 2006; White et al., 2004). Thus, our findings are consistent with other research and give additional support by suggesting that agreeableness seems to be the personality trait, which is related to individuals' dating success the most.

Furthermore, individuals with a higher level of Inceldom tend to be higher on neuroticism. Seemingly, individuals with high neuroticism, tend to have higher self-doubt and insecurities, which could decrease their success in dating. This result is in line with previous literature, which suggests, that the personality trait neuroticism seems to relate to dating success (Donnelly et al., 2001; White et al., 2004). Additionally, Incels' high neuroticism could explain their increased frustration and negative reaction to rejection.

Next, individuals with a higher level of Inceldom also tend to score low on extraversion. Allegedly, individuals high on extraversion could find it easier to approach others, and, consequently, may be more likely to meet more people and thus a potential partner. Individuals low on extraversion might lack the assertiveness or social skills, which could help in attracting a mate. Extraversion has been previously linked to dating success in several studies (Jia et al., 2016; Schmitt & Buss, 2000; White et al., 2004). Thus, our findings are in line with previous research, indicating that extraversion seems to play a role in finding a partner.

Moreover, individuals with a high level of Inceldom tend to have low conscientiousness. Individuals with low conscientiousness may be more likely to give up quickly in the search for a partner, thus might be less likely to establish a romantic relationship. Previous research has been undecided on conscientiousness' role in dating success yet. Some studies have found a link (Jia et al., 2016; Schmitt & Shackelford, 2008), whereas others did not (White et al., 2004). Nevertheless, this study found support for a relationship between conscientiousness and dating success, even though this relationship seems not to be particularly strong.

In this study, we also established that Incels indeed have stronger misogynistic views. Furthermore, individuals with strong misogynistic views tend to have low openness and low agreeableness. Individuals with these explicit traits may be less likely to encounter people who might challenge their views. These results are consistent with findings of other research, where the traits of openness to experience and agreeableness, among all Big Five traits, were the strongest predictors for misogyny (Christopher et al., 2013; Ekehammar & Akrami, 2007; Hald & Malamuth, 2015; McPherson, 2019.) Because Incels tend to have low openness as well as low agreeableness, it seems they might be prone to establish misogynistic views. Thus, our

findings show additional empirical evidence for openness' and agreeableness' predictive power towards misogyny in the sample of involuntary celibates.

Lastly, our research has also discovered two relationships between specific personality traits and Incel related characteristics. First, openness to experience was related to the identification with the Incel community. Seemingly, individuals with low openness tend to relate more to other Incels. Since individuals, low on openness, also tend to have stronger misogynistic views, they might prefer to engage and identify stronger with the group, which shares their extreme values. Prior studies have established a link between openness and ingroup identification before (Jenkins et al., 2012; McCrae & Sutin, 2009). Thus, our findings add further support for openness' relationship with ingroup identification.

Next, this study revealed that the trait of agreeableness seems to play an important part when it comes to online activity. Individuals with lower agreeableness were found to post more frequently in Incel forums. This result is in line with previous research, which suggests that the trait of agreeableness is related to internet use (Muscanell, & Guadagno, 2012; Ross et al., 2009). Individuals low on agreeableness may have a harder time to find connections in the physical world, thus may be more prone to use the internet to be able to engage with others.

Finally, these findings on personality contribute to the identification of individuals who are likely to fail at attracting a partner. Early recognition and support for Incel-prone individuals are essential, in order to prevent Incels manifesting an extremist ideology in Incel forums. Incels might be less likely to turn to these forums and become violent if support systems would be able to recognise Incels earlier. School counsellors or mental health professionals might identify personalities which have tendencies towards Inceldom, thus adjust their care. Special coping mechanisms to regulate their increased frustration or to help with social skills and confidence could be an option.

Strengths, Limitations and Future Research

A major strength of this study is that it included 20 participants who identified as Incels. Thus, it was possible to examine actual members of this community and compare them to a greater population. It is usually challenging to reach Incels due to their general suspicion and closed-off communities. They are even more difficult to find since numerous Incel forums were recently shut down. However, this is still a small sample size which limits the statistical power: Some *p*-values might be unbalanced or misbalanced.

Next to the sample size, it must be considered that this sample of 20 Incels might also not be representable for the whole Incel community: Rather more open-minded and agreeable Incels might have joined to participate in the study since they showed trust in disclosing their

attitudes. The private, closed-off community might differ notably in their personality from the Incels, who voluntarily participated.

Therefore, in order to find a greater and more representable sample, researchers should take into account the challenges that come with investigating online communities. Further research might make use of specific recruitment services and ideally approach Incels as a male researcher, in order to avoid suspicion on the Incels side. In order to give Incels more trust in communicating their thoughts, one should also be as transparent as possible about research intentions.

Next, another strength of this study is the introduction of a new instrument. The scale was able to recreate statistical differences in misogynistic views and personality between low- and high-Incels. Thus, it was possible to apply the concept of involuntary celibacy to a greater sample and to find individuals with “Incel” traits in the broader population. However, the limitation of this scale must be taken into account: Because some findings of self-identified Incels were not reflected by participants being categorised using the level of Inceldom scale, these categorisations seemed not to be in line. So, although it is a reliable scale, it may not have validly differentiated Incels from non-Incels. Thus, future research should ideally investigate self-identified Incels to be able to replicate our findings.

Another limitation of this study is that researchers did not make a distinction between Incels and Femcels (female Incels). For convenience, both genders were taken into account and, thus, caused more females than males taking part in this study. Females tend to be more agreeable (Weisberg et al., 2011), which could have made the differences greater between Incels and non-Incels which mostly consisted of female participants, and Incels which consisted mostly of males. Future research might focus on the differences between Incels and Femcels regarding their personality traits and misogyny and investigate whether Femcels’ scores significantly differ from male Incels’.

Furthermore, another limitation of this study is that only the personality effects on Inceldom and misogyny were investigated. According to previous research, personality does indeed affect the relationship status more than the other way around (Neyer & Asendorpf, 2001; Scaptura & Boyle, 2019). However, it is questionable whether Incels' misogynist views lead them to become Incels in the first place, by not attracting a partner with their extremist views, or instead, the experience of persistent rejection causes Incels to become more misogynistic in the long run. This relationship may be investigated by future research, in order to understand Incels tendency to become misogynistic.

Finally, the current study only investigated the broad Big Five dimensions, which might have limited the insight into specific personality facets. Future research might examine whether certain sub-traits are linked to the personality traits of Incels as well. These facets might be more predictive of Incel related characteristics and, thus, provide further possible explanations for misogynistic ideologies.

Conclusion

Despite some limitations, this study was able to extend previous research by i.) identifying actual misogyny levels of Incels, ii.) establishing important personality traits when it comes to involuntary celibacy, and iii.) discovering further empirical evidence for personality traits predicting misogyny. It became clear that some personality traits correlate with higher dating success whereas others interplay with difficulties finding a partner. These insights can be used to assess whether individuals are likely to turn to Incel forums and, thus, are likely to identify with misogynistic ideologies. Despite the challenges that come with investigating these communities, exploring underlying reasons for joining them, is essential in order to reduce misogyny in the current world.

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Appendix A**Incel scales****A1. Incel Status items**

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 incelldom.

Do you identify as an Incel?

Yes

No

A2. Incel Forum Activity items

Are you a member of any Incel forums/groups?

Yes

No

If Yes:

How frequently do you log in to check or read the discussions on the Incel forums/groups?

1-I never read the forums/groups

2-less than once a year

3-once or twice a year

4-about 6 times a year

5-about once or twice a month

6-about once a week

7-about 2-5 times a week

8-about once a day

9-about 2-5 times a day

10-more than 5 times a day

How frequently do you log in to post on the Incel forums/groups?

- 1-I never post on the forums/groups
- 2-less than once a year
- 3-once or twice a year
- 4-about 6 times a year
- 5-about once or twice a month
- 6-about once a week
- 7-about 2-5 times a week
- 8-about once a day
- 9-about 2-5 times a day
- 10-more than 5 times a day

A3. Level of Inceldom items

I have tried having sexual/romantic relationships, but I have been rejected too many times.

I have tried having sexual/romantic relationships, but I have failed too many times.

I want to find a romantic/sexual partner, but I am too physically unattractive.

I want to date, but nobody wants to date me.

I want to have sex, but there is no one to do it with.

I want to love someone, but there is no one out there for me.

No one from the opposite sex ever shows an interest in me.

*I have never been lucky enough to enjoy the pleasure of kissing a person of the opposite sex.
(taken out)*

*I have never been lucky enough to enjoy the pleasure of dating a person of the opposite sex.
(taken out)*

I have never been lucky enough to enjoy the pleasure of having sex with a person of the opposite sex. (taken out)

*I have never been lucky enough to enjoy the pleasure of being desired by the opposite sex.
(taken out)*

Other men/women are enjoying the pleasure of having romantic/sexual experiences, but not me.

Appendix B
Identification scale

A Three-Factor Model of Social Identity by Cameron (2004): Ingroup Ties

1. I have a lot in common with other Incels.
2. I feel strong ties to other Incels.
3. I find it difficult to form a bond with other Incels.
4. I don't feel a sense of being "connected" with other Incels
5. I really "fit in" with other Incels.

Appendix C
Misogyny scale

Hostility Toward Women Scale by Check (1985)

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. (M) Generally, it is safer not to trust women.
(F) It is generally safer not to trust women too much.
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
Personality scale

The Big Five Inventory–2 Extra-Short Form (BFI-2-XS) by Soto and John (2017)

I am someone who...

1. Tends to be quiet.
2. Is compassionate, has a soft heart.
3. Tends to be disorganised.
4. Worries a lot.
5. Is fascinated by art, music, or literature.
6. Is dominant, acts as a leader.
7. Is sometimes rude to others.
8. Has difficulty getting started on tasks.
9. Tends to feel depressed, blue.
10. Has little interest in abstract ideas.
11. Is full of energy.
12. Assumes the best about people.
13. Is reliable, can always be counted on.
14. Is emotionally stable, not easily upset.
15. Is original, comes up with new ideas.

Appendix E

Tables

Table 10

Factor Matrix

Level of Inceldom item	Factor 1
I want to date, but nobody wants to date me.	.88
I want to have sex, but there is no one to do it with.	.83
No one from the opposite sex ever shows an interest in me.	.80
I want to find a romantic/sexual partner, but I am too physically unattractive.	.79
Other men/women are enjoying the pleasure of having romantic/sexual experiences, but not me.	.75
I want to love someone, but there is no one out there for me.	.73
I have tried having sexual/romantic relationships, but I have failed too many times.	.63
I have tried having sexual/romantic relationships, but I have been rejected too many times.	.62
Extraction Method: Maximum Likelihood.	