Involuntary Celibate (Incel): validation of the Incel Trait Scale (ITS) in the Italian male population

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SUMMARY

Introduction

The term Incel represents the union of the words "INvoluntary" and "CELibates" (involuntary celibate) and it refers to a male phenomenon of discrimination and hate towards female population. In some cases, Incel characterized also by aggressive behaviors and violence acts, due to social and psychological factors. For this reason, it is necessary an accurate evaluation of Incel phenomenon to prevent it.

Objectives

Therefore, the aims are to validate the Incel Trait Scale (ITS) in the Italian Language, analyze the structure of the scale and adapt it to the Italian population.

Methods

A total of 1316 Italian cisgender (gender identity matched assigned sex at birth) men participated in the study, they fill out the survey on the online platform QUALTRICS. We administered them a set of questionnaires, with the sociodemographic part and the Italian version of ITS.

Results

Explorative and Confirmatory Factor Analysis revealed good fit indexes (CFA: $\chi^2/df = 6.375$, SRMR = .065, CFI = .885, RMSEA = .070). Also, reliability was good with the Cronbach α coefficient of .887 for Failure factor, .810 for Outcasted factor, and .712 for Enraged factor.

Conclusions

Incel Trait Scale (ITS) represents the first psychometric tool to evaluate the Incel phenomenon among Italian male population and it is fundamental to prevent and individuate risk factors for the gender violence in terms of discrimination and aggression. Moreover, ITS also permits to better studied the psychopathological factors associated to Involuntary Celibate.

Key words: Involuntary Celibate, Incel, psychometry, assessment, psychopathology

Introduction

The term Incel represents the union of the words "INvoluntary" and "CELibates" (involuntary celibate), these are mainly heterosexual men who consider themselves unable to establish sexual and romantic relationships with a woman [1].

This term was coined by Alana – a bisexual Canadian student – in 1997. Alana created an online forum called *Alana's Involuntary Celibacy Project* with the aim of build an inclusive community and form a virtual support group to help those who were struggling with intimate relationships [2]. Over time these forums have changed, they became a place where the participants had the opportunity to manifest their aggressiveness against wom-

an. Following the same patterns, the concept of being Incel has also changed, so in 2003 Alana decided to close her blog [2]. Today the term is used to refer mainly to misogynistic men who are seeking heterosexual sex. The Incel subculture was born within online communities, particularly in the so-called *Manosphere*. The Manosphere is a term used to refer to blogs, websites and forums in which participants believe in the centralization of the male figure and show a total and declared aversion to feminism [3].

The ideology behind the Incel culture is strongly radicalized against feminism. According to Incel' view feminism undermines and weakens all men's social role [3,4]. However, Incel ideologies present a clear purely misogynist vision [5], capable of fueling the false belief that women are the only ones to blame for Incel's loneliness and sexual frustration. In this subculture, it is believed that, from a biological point of view, man and woman are different and consequently have other sexual selection criteria [1]. According to this idea, women reject them because they are unattractive. In this sense, Incels do not consider themselves unattractive only from a physical point of view, also status and wealth are, according to them, relevant aspects in the possibility of having a partner or not [6].

Most of the study on the Incel population focus on the misogynistic and political side of the phenomenon [7-9], while fewer studies focused on their personality and mental health [10]. The phenomenon of Incels has become worrisome as stated by a EU official document investigating the Incel phenomenon, most of those who identified as Incel, are also extremists, and take part in Nazism and racists movements such as "altright" and "whitecel" [11]. Although this phenomenon has existed for several years, it has only recently aroused great interest in sociologists and psychologists, due to the worrying number of episodes of violence claimed by white Incels. The explicit attitudes of hostility towards women seem to generate a possible scenario of aggravated violence against women, as previously demonstrated by the attack of a self-proclaimed Incel which took place in 2018 in Toronto [12]. In fact, from 2014 until now, attacks by Incel have occurred mainly in America and Canada [3,13]. The first attack by a man claiming to be Incel, Elliot Roger, happened in California in 2014. He killed 6 people, injuring 14 others, before committing suicide [13]. Then others followed, not only in the United States, but also in Canada and around Europe [7,14].

In the light of these considerations, it is crucial to understand and evaluate Incel's characteristics, in order to prevent violent conduct but also to create adequate programs of interventions [15].

In this regard, Scaptura and Boyle (2019) developed a self-report questionnaire that can measure possible incel traits of personality. Following the Identity theory model, a two-step process in which researchers define words and meanings associated with a particular identity, and then this set of bipolar measures is delivered to respondents and factor analysis is used to assess validity. The measure is then used to predict behaviors, emotions, or distress. Authors determined words and meanings associated with Incel personality, by coding traits and characteristics that journalists associated with these individuals and this community about their relationships with women, gathered via Google News [4]. The validation process was made on a sample of 541 American men, from the general population, aged from 18 to 30 years old [4]. The participant had to specify which word in the pair best represents himself, and rate it from 0 to 9. The "Incel trait scale" composed of twenty items has a satisfactory internal consistency ($\alpha = .92$). Starting from a pool of 29 items, factor analysis revealed two basic factors, the first factor, called *defeat* contains 13 items ($\alpha = .91$) and the second, called *hateful*, has 7 items ($\alpha = .81$) [4]. At the present, this represents the only measure of Incel personality characteristics published.

Aims

There are some evidences of the spread of the Incel subculture in Italy, especially online, but to our knowledge an Italian measure of Incel characteristics is not available. Based on the above considerations, the aims of the present study are to validate the ITS in the Italian Language, analyze the structure of the scale and adapt it to the Italian population.

Methods

Participants and procedures

A total of 1316 Italian cisgender (gender identity matched assigned sex at birth) men participated in the study, they fill out the survey on the online platform QUALTRICS. Participants were recruited through a snowball sampling in the main social media, in the general population. Inclusion criteria were being at least 18 years old, being cisgender male, understand Italian language. The data collection took place between September 2021 and January 2022. The research protocol was approved by the Institutional Review Board of Psychology of the Department of Psychological, Health and Territorial Sciences of the University "G. d'Annunzio" of Chieti-Pescara (nr. 21004). Participants were informed about the research's aims and privacy settings and did not receive any financial compensation for their participation in the study. Each participant, therefore, gave the own consent for the study responding to a specific item on the online platform. The entire protocol was

TABLE I. *Descriptive characteristics of the sample.*

Variables	Frequency (%)
Nationality	
Italian	881(98.8)
Foreign	11(1.2)
Relational status	
Married	107(12.0)
Single	447(50.0)
In a relationship	338(38.0)
Scolarity	
Middle school	25(2.8)
High school diploma	368(42.0)
Bachelor degree	237(26.5)
Master degree	185(20.2)
Post-lauream	77(8.5)

anonymous. After removing incomplete protocols and participants who did not meet the inclusion criteria, the final sample for the present study was composed by 892 participants, aged between 18 and 50 years old (M = 29.40, Sd = 8.03), demographic and personal characteristics are reported in Table I.

Assessment
Participants were administrated with a set of questionnaires, divided into two parts. The first part consisted in a sociodemographic questionnaire including information about age, education and relationship status. The second part was composed by the Italian translation of the ITS,

Incel Trait Scale (ITS)
The "Incel trait scale" consists of 20 pairs of opposite adjectives, such as "strong" and "weak", "fulfilled-frustrated", "accepted – rejected", "successful-defeated" and "violent-nonviolent". respondents have to slide the scale to "indicate which word describes you better". Each pair was scaled from 0 to 9. The pair was randomly presented to participants, and then recoded as follow: 0 corresponds to the "good" and "positive" adjective in the pair, while 9 correspond to the negative antonym and related to the Incel personality.

ITS translation and adaptation
We put the original version of the ITS through a forward and backward translation technique, having developed a consensus of the authors who developed the scale. The translation and adaptation were carried out from English to Italian by two expert bilingual translators. A group of clinical psychologists evaluated each word, according to an accurate interpretation of the Italian population. The main challenge was to discriminate the meaning of some terms that are synonyms in the Italian

language, preserving the correct emotional nuance in our language.

Analysis plan
The first step consisted in the language adaptation, using the forward and backward translation technique. In the second step we conducted a confirmatory analysis following Scapatura and Boyle (2019) subscale division. Unfortunately, the structure of the original version didn't fit with our data. considering these results, we conducted an exploratory factor analysis and subsequentially a confirmatory factor analysis.

Statistical analysis
The Statistical Package for Social Science (SPSS) version 26 for Windows and AMOS were used to run the explorative factor analysis and the confirmatory factor analysis (CFA) and the correlation between the variables. Internal consistency was estimated by the Cronbach α coefficient, for both the subscales and total score: $\alpha > .90$ are considered excellent indicators, α comprised between .80 and .90 are very good indicators, α included between .70 and .80 are evaluated as appropriate, coefficient included between .70 and .80 are estimated as sufficient, and $\alpha < .60$ are insufficient indicators. We conducted an exploratory factor analysis to better evaluate the structure of our Italian version of the "Incel Trait Scale". Specifically, the component structure and reliability of the questionnaire was explored using principal component analysis (PCA). A varimax rotation was used. We used the scree plot, the eigenvalues, and the parallel analysis (with 1000 replications) to guide the retention of the components.
CFA was carried out using the Maximum Likelihood as appropriate estimator. Model fit was evaluated by means of the following fit indexes: the χ^2/df statistic; the Root Mean Square Error of Approximation (RMSEA) assessing the fitting of the model to the general population (the RMSEA value indicates a good adaptation the more its rate approaches "0", Browne and Cudek (1993) suggest that values ranging from .05 and .08 are indicative of an satisfactory fit) [16]; the Comparative Fit Index (CFI) show scores between 0 and 1 (a value over .95 is considered excellent, a value between .90 and .95 considerate a very good index, values between .85 and .90 are considered good) and the Standardized Root Mean Square Residual (SRMR) specifies the difference between the residuals of the sample covariance matrix and the theorized model, an acceptable value is considered less than .08 [17].

Results

Explorative and confirmatory factor analysis
The results from these analyses revealed a three factors

structure with satisfactory reliability values, unlikely the original version that identified only two factors (defeated and hateful). We named the first factor as "Failure" since it reflects those "Incel" traits and attitudes associated to failure, insecurity, and frustration. The second factor, "Outcasted", is related to aspects concerning rejection and ostracization. Finally, the third factor, "Enraged", is associated to traits and attitudes such as violence, rage, and resentment. The factor structure of the questionnaire was evaluated using PCA. A varimax rotation was used. The pattern matrix and the items corresponding to the Incel personality is reported in Table II. Nine items showed satisfactory loadings (i.e., > 0.40) on the first factor, five items showed satisfactory loadings on the second factor and further five items showed satisfactory loadings on the third factor. One item (i.e, "disgusted") showed cross-loadings (i.e., a difference < 0.20 between the loadings on two or more components), and therefore was excluded from the final measure.

We testes the PCA model by means of a CFA reported in Figure 1 where the three-factor model, composed by 19 items and scale are correlated with each other. The model fit indices were: $\chi^2/df = 6.375$, SRMR = .065, CFI = .885, RMSEA = .070. According to the field lit-erature [16,17] the goodness of these fit indexes is acceptable. In Table III are reported the mean and standard deviations for each item, and the factor loadings for 19 item and 3 factors, which range from good to adequate (Fig. 1).

Reliability
The analysis of internal consistency showed an overall Cronbach's α coefficient of .886. In the three subscales, the Cronbach α coefficient was .887 for Failure factor, .810 for Outcasted factor, and .712 for Enraged factor.

Correlation among ITS scales
We found positive correlation between the three ITS factors. Each factor positively correlates with another subsacale as well as the total ITS score: failure correlates with outcasted (r = .666, p > .001) and enraged (r =. 160, p > .001) and the total score (r = .892, p > .001); outcasted factor positively correlates with en-

TABLE II. *Pattern matrix of the PCA for the "Incel Traits Scale".*

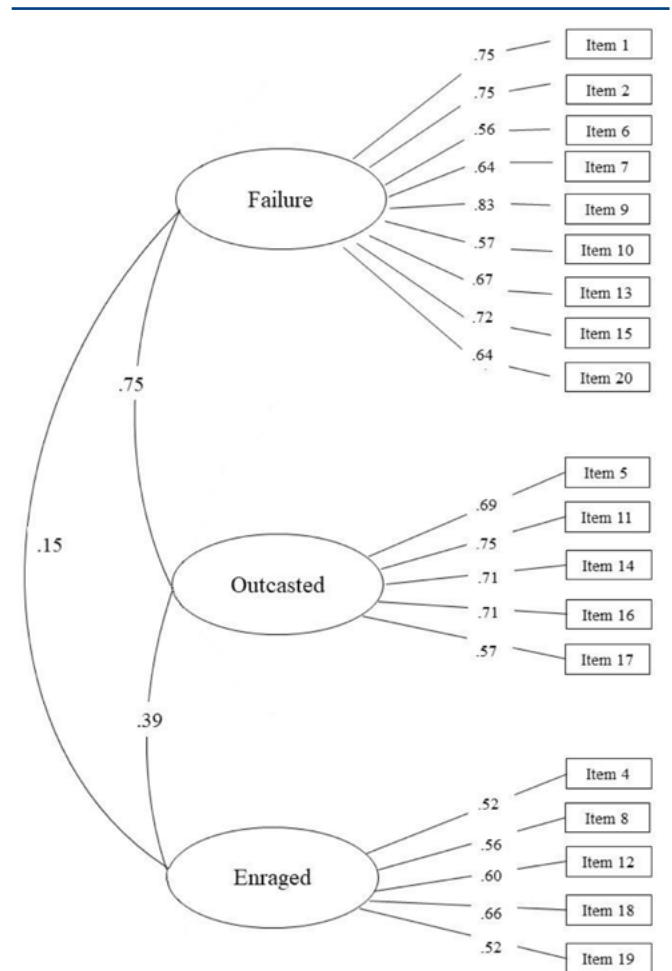| Scale	Item		Factor loading		
			A	B	C
A. Failure	ITEM 1	Insecure	.831		
	ITEM 2	Confused	.784		
	ITEM 6	Not confident	.775		
	ITEM 7	Frustrated	.706		
	ITEM 9	Sad	.650		
	ITEM 10	Paranoid	.627		
	ITEM 13	Defeated	.614		
	ITEM 15	Weak	.602		
	ITEM 20	Fearful	.511		
B. Outcasted	ITEM 5	Shunned		.760	
	ITEM 11	Rejected		.685	
	ITEM 14	Unattractive		.573	
	ITEM 16	Scorned		.554	
	ITEM 17	Excluded		.539	
C. Enraged	ITEM 4	Vengeful			.808
	ITEM 8	Enraged			.679
	ITEM 12	Resentful			.673
	ITEM 18	Violent			.513
	ITEM 19	Hateful			.489

FIGURE 1. *Confirmatory factor analysis representation. Confirmatory factor analysis of the Incel Trait Scale. Model shows standardized parameters estimates.*

TABLE III. *M, SD and factor loadings (CFA) of the single items of the italian version of the "Incel Traits Scale".*

Scale	Item		M	SD	Factor loading
A. Failure	ITEM 1	Insecure	3.97	2.33	.75
	ITEM 2	Confused	3.56	2.17	.75
	ITEM 6	Not confident	4.07	2.40	.56
	ITEM 7	Frustrated	4.09	2.18	.64
	ITEM 9	Sad	3.60	2.20	.83
	ITEM 10	Paranoid	3.74	2.30	.57
	ITEM 13	Defeated	3.90	1.87	.67
	ITEM 15	Weak	3.67	1.94	.72
	ITEM 20	Fearful	4.03	1.91	.64
B. Outcasted	ITEM 5	Shunned	2.83	1.84	.69
	ITEM 11	Rejected	3.12	2.15	.75
	ITEM 14	Unattractive	3.91	2.02	.71
	ITEM 16	Scorned	3.34	1.64	.71
	ITEM 17	Excluded	3.49	2.23	.57
C. Enraged	ITEM 4	Vengeful	3.51	2.27	.52
	ITEM 8	Enraged	3.07	2.18	.56
	ITEM 12	Resentful	3.02	2.24	.60
	ITEM 18	Violent	1.91	2.14	.66
	ITEM 19	Hateful	2.90	1.90	.52

raged and the total score as well (respectively r = .295, p > .001, r = .841, p > .001). Finally enraged correlates with the total score for r = .520, p > .001.

Discussion

The study has presented the first Italian validation of the ITS questionnaire, a measure for the assessment of Incel's personality characteristics developed by Scapatura and Boyle (2019) [4]. Incels phenomenon is growing faster, and due to its political and social implication along with its violent outcomes, both online and in real life, it has rapidly become a social problem, has highlighted by the European Commission [11]. The ITS is a quick and easy questionnaire that can help to assess Incel characteristics in the general population, and its good psychometric qualities make it an applicable tool for studying and screening the phenomenon in our Country. The internal consistency of the three subfactors and the overall score is good and make it a reliable tool for the evaluation of Incel characteristics. The CFA showed that the first-order model with failure, outcasted and enraged factors demonstrated an adequate fit, and the factor loading were acceptable, as well as the correlation between factors. Nonetheless, the third factor "enraged" was the psychometrically weakest

one (Tab. III) due to the "violent- nonviolent" item, and that was similar to the original version (where r = .10, p < .05; [4]). Probably, these lower values maybe due to the fact that our large-scale sample is composed by a general population and not only by self-declared Incel. Despite that, the goodness of the model values suggests that ITS can be a reliable measure to assess Incel characteristics in the population of male, even in those that do not declare themselves as Incel but can be at risk of join such extremist group. Moreover, the three factors failure, outcasted and enraged describe the aspects related to the sense of failure, exclusion, anger and resentment that characterize the perception and thus the behavior of Incel people [1], overlapping the results obtained by the original validation, even if those aspect are grouped in two factors. In particular, failure factor reflects the sense of frustration and defeat that Incel individual feel about sexual and romantic relationship, as well as in other aspects of their life, that can be a consequence of other mental issues [18]. The factor outcasted, instead, describe the feeling of exclusion and rejection that Incels perceive from the society, and the idea that the society, in particular feminists' movement and left politics, is to blame for their condition. This external locus of control is appeared to be a central as-

pect of Incel personality, and it is well detected by the ITS. Enraged factor, finally, reflects the need for revenge and the resentfulness that permeates the Incel community, that can be violently acted upon women and other targeted minorities [15,19]. According to our results, the Incel Trait Scale is a reliable measure to assess Incels personality traits, and can be useful, in conjunction with other instruments, to explore and analyzing the phenomenon and early recognize potential risk factors of violent behaviors.

Limitations and future directions
Despite the promising results the present study has some limitations that have to be addressed. In the first place, the large sample size is composed by male recruited from the general population, more in-dept studies are required to validate the ITS in a population of self-declared Incels. Due to that limitation, the third factor "enraged" values are acceptable but not excellent and more studies on different sample are required to confirm our three-factors structure. Future studies should also include general personality traits in the validation process in order to further confirm the validity of the ITS.

Conclusions
Italian validation of ITS has revealed good psychometric proprieties for the evaluation of Incels' personality traits. To date, ITS is the only published and useful instrument to early recognize Incels' traits and can be easily used in research protocol to evaluate Incels' behavioral and personality patterns. This psychometric tool will be very useful to assess the psychopathological risk factors and the behavioral characteristics associated to the Incel's attitude in the male Italian population. Therefore, the evaluation of this particular form of misogyny is fundamental to prevent the gender violence and also to avoid deviant and aggressive behaviors in Incel men.

Authors' contributions
LF: Conceptualization and design of the research, Project Administration, Formal Analysis, Writing-Original Draft, Writing-Review & Editing; GC: Investigation-Data Collection, Writing-Original Draft, Writing-Review & Editing; ADC: Writing-Original Draft, Writing-Review & Editing; MV: Review & Editing; EAJ: Conceptualization and design of the research, Writing-Review & Editing; GC: Conceptualization and design of the research, Project Administration, Writing-Original Draft, Writing-Review & Editing.

Ethical consideration
The entire protocol was approved by the Institutional Review Board of Psychology of the Department of Psychological, Health and Territorial Sciences of the University G. d'Annunzio of Chieti-Pescara (nr. 21004).

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