# Dark Triad in higher education and gender-based violence prevention

## Dark Triad en la educación superior y prevención de la violencia de género

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**Abstract**

*International organisations support the strengthening of gender training for professionals to prevent institutional violence suffered by victims due to professional bias. Studying extreme personality traits makes it easier to face this challenge. The aim of this research is to explore the frequency of the Dark Personality Triad and its relationship with violence against women in recent university students from disciplinary fields whose professional practice is directly or indirectly related to victim care. A quantitative descriptive-correlational methodology based on a survey was used, applying the DD12 scale, ASI, RSAS and Microviolence in the couple, with high reliability. A total of 1613 students from the University of Seville participated in the study, selected by stratified random sampling by clusters. The results indicate that 5.6% of students, mostly male, show high scores in dark triad and violence orientation, being more prevalent in scientific-technical careers, although it is also present in health and security careers. Practical implications are derived from the results for the prevention of gender violence from the Equality Units.*

*Keywords:* Dark triad; Higher education; Intimate partner violence against women; Prevention.

## Resumen

*Organismos Internacionales apoyan reforzar la formación en género de profesionales para prevenir la violencia institucional que sufren las víctimas debido al sesgo profesional. Estudiar rasgos de personalidad extrema facilita afrontar este desafío. El objetivo de esta investigación consiste en explorar la frecuencia de la Tríada Oscura de la Personalidad y su relación con la violencia contra las mujeres, en alumnado universitario de reciente ingreso de ámbitos disciplinares cuya praxis profesional está, directa o indirectamente, relacionada con la atención a víctimas. Se utiliza una metodología cuantitativa de corte descriptivo-correlacional basada en encuesta, aplicando la escala DD12, ASI, RSAS y Microviolencia en la pareja, con una alta fiabilidad. Participan en el estudio 1613 estudiantes de la Universidad de Sevilla seleccionados mediante muestreo aleatorio estratificado por conglomerados. Los resultados indican que un 5,6% del alumnado, mayoritariamente masculino, muestra puntuaciones altas en triada oscura y orientación a la violencia, siendo mayor su prevalencia en carreras científico-técnicas, aunque también tiene presencia en carreras sanitarias y de seguridad. Se derivan implicaciones prácticas de los resultados para la prevención de la violencia de género desde las Unidades de Igualdad.*

*Palabras clave:* Tríada oscura; Educación Superior; Violencia íntima de pareja contra las mujeres; Prevención.

## Introduction and objectives

The World Health Organisation (2013) defines violence against women and elevates it to a state-level problem. Furthermore, according to this organisation, the eradication of all forms of violence against women represents a Sustainable Development Goal (SDG) to be achieved by 2030. Feldman and Ridley (2003) state that forms of aggression that do not necessarily result in physical harm are also forms of violence; sometimes they may even be so subtle that they are not perceived as violence. Professional competence is needed to assess them.

It is necessary for victims of intimate partner violence against women (hereafter IPVAW) to face their improvement process with the support of professionals with specialised university training. In this sense, García-Pérez and Rodríguez-López (2021) point out that the incompetence of professionals due to a lack of training in gender hinders the victims' recovery process. This is influenced by aspects such as sexism, the acceptance of myths of violence against women or the acceptance of sexual violence that give shape to what has come to be called "the route of violence" suffered by women once they decide to overcome great difficulties and report their cases to the justice system, in reference to the institutional mistreatment they receive when they are not listened to, believed or protected.

In 2017, the Spanish Congress of Deputies approved the State Pact on Gender Violence, which includes 292 measures grouped into 10 lines of action aimed at prevention, improvement of institutional responses, assistance to victims and training of professional teams whose practice is closely related to IPVAW.

The training of these professionals is fundamental, as stated in Amnesty International's report (2018), which indicates that "the international and regional human rights framework establishes the obligation and duty of States to strengthen the appropriate training of relevant professionals dealing with victims" (p. 23). In this sense, the Junta de

Andalucía has elaborated in 2022 a collection of manuals for a comprehensive professional approach to violence against women (Paz-Rodríguez et al., 2022), which includes a specific section dedicated to professional gender bias.

## Universities and violence in IPVAW

Looking beyond acts of intimate partner violence, we can observe other problems that are associated with the worsening of the recovery processes of IPVAW victims. Here we address the role of universities in the prevention of institutional violence, often produced by poorly trained professionals in Higher Education, who end up perpetrating secondary violence and facilitating re-victimisation.

> As De Alencar and Cantera (2013) argue, coping with violence depends not only on the individual level (the woman's decision and personal factors) but on a joint intervention with the family, neighbourhood, social networks, institutions that combat cultural values such as the acceptance of violence and male dominance that hinder the cessation or reduction of gender-based intimate partner violence (p. 96).

These researchers call for "an ecological approach" that takes into account the influence of the institutional factor. So how can we challenge our universities to make a decisive commitment to training professionals in the field of gender-based violence in order to reduce the risks of exposing victims to secondary violence?

This violence is more prevalent in the judicial sphere, due to delays in proceedings, but it affects "due diligence" in all professional spheres in the prevention of IPVAW (Espinoza, 2019).

Our Public Administrations, with any kind of link to the prevention of IPVAW, through their professionals belonging to areas such as: Education, Health, Communication, Psychosocial Care, Legal-Economic and Security, who provide public services of the State and its territorial or local Administrations, may incur in serious errors due to professional gender incompetence that end up weighing down the recovery of women who suffer IPVAW. In this sense, Peral (2020) maintains that

> While it is true that institutions, in general, reject gender-based violence, in practice they recognise that, in many cases, the lack of coordination, the shortage of specific training, the scarcity of resources and the absence of a gender perspective mean that the risk to victims and their children is minimised (p. 177).

The consequences of minimising violence on mothers and children are well known and point to serious outcomes, sometimes resulting in death and mostly ending in serious disorders.

The responsibility of public universities in this secondary victimisation, which women and their children may suffer due to institutional errors that prolong the situation, is determined and clarified by the laws on gender-based violence. In these laws, Higher Education is given the responsibility to monitor the gender competence of professionals who will deal with women victims and male perpetrators of violence.

In Andalusia, the legal provision in this respect is still in force; in the laws of the Autonomous Communities of Andalusia, the law of the Autonomous Communities of Andalusia is still in force. AA. Applicable, Law 13/2007 (Art. 16. 2) and Law 7/2018 (Art. 2. e). This university mission must be achieved despite the pressure of the social media,

where authentic multimedia factories of patriarchal neomyths (Herrero-Diaz et al., 2020) and anti-feminism operate, where IPVAW is a key issue of information manipulation.

Gender uninformed people tend to normalise the myths of violence against women (Occeñola, 2018), e.g. in relation to vicarious violence, they assume the myth that these fathers who abuse mothers are good fathers for their sons and daughters. Even for people with gender training, it is necessary to know the personalities of the perpetrators of IPVAW and to know how to neutralise the great capacity for manipulation that perpetrators exercise during the IPVAW process (Pozueco et al., 2013).

Therefore, institutional violence must be understood as a flexible concept, which can include secondary actions that induce re-victimisation, making the victims' recovery process more difficult. From this flexible concept, a social responsibility for public universities in the prevention of re-victimisation to which victims are exposed in the institutional sphere due to dubious professional actions can be glimpsed.

### The Dark Triad of Personality (TRIOPE) at the university

Some extreme personality traits may be associated with greater difficulty in gender training and educability of university students. Following Paulhus and Williams, (2002) we investigated the Dark Triad (DITOPE). This construct is a pattern of traits categorised as aversive or "dark", such as: subclinical psychopathy, subclinical narcissism and Machiavellianism, which tend to occur together. These traits may also be associated with biased future professional performance in the IPVAW field.

Jones and Paulhus, (2017) find common characteristics in these personality dimensions such as grandiosity, emotional coldness, manipulation, aggressiveness, interpersonal exploitation and lack of empathy, emphasising that we are talking about pathological personality traits at a subclinical level, i.e. people who are not under clinical supervision or institutionalised. Therefore, these traits may be present in a normal population.

Taking into account these personality traits, the metaphor of the dark side as the most negative part of human relationships is understandable (Pozueco and Moreno, 2013). According to Koehn et al. (2019), analysing and knowing these traits can help us predict behaviours.

Following the line of Davies and Berger (2019), Ferrer and Bosch (2019), Olszowy et al. (2020), Paz-Rodríguez et al. (2022), Rebollo-Catalán and García-Pérez (2023) who warn about the impact of gender blindness in biased professional actions on gender-based violence against women, this paper aims to put the focus on TRIOPE in Higher Education.

Specifically, our objective is to explore the prevalence of TRIOPE in first-year university students in undergraduate degrees from different university fields and who, in the future, may develop professions that are directly or indirectly related to the care of women victims of IPVAW. To this end, we propose the following specific objectives:

- To analyse the levels of incidence of TRIOPE in students of different university degrees.
- To explore the multivariate relationship between the trait level of the TRIOPE and other variables in the IPVAW field.

### Method

The methodological design is quantitative, with a descriptive and correlational logic, applying the survey method to 1613 new students at the University of Seville (hereinafter US), with age ranges between 17-24 years.

## Population and Sample

To calculate the sample size, we consulted official US data on the incoming student population during the 2018-2019 academic year (N=11,313). It is planned to obtain a sample (n > 1500) sufficient to infer population parameters from the statistics calculated in this study (±2.5% with a confidence level of 95.5%).

We applied a random sampling by clusters (30 classrooms) and proportionally stratified according to professional fields (table 1). In order to further refine the type of university degrees that may be related to women victims of IPVAW in the future, we have classified them according to professional fields and not according to the classic branches of knowledge, as we consider these to be too global for this subject. We highlight 6 groups of undergraduate degrees related to areas of attention to violence against women, adding a 7th global category for the remaining degrees.

Table 1

*Professional field/gender.*

| Professional Areas (30 classrooms) | | Gender | | | |
| | | Female n=933 | | Male n=680 | |
| | n | n | % | n | % |
| --- | --- | --- | --- | --- | --- |
| 1.- Educational (3) | 137 | 100 | 73.0 | 37 | 27.0 |
| 2.- Sanitary (5) | 287 | 177 | 61,7 | 110 | 38,3 |
| Informative/communicative (4) | 221 | 198 | 57,9 | 93 | 42,1 |
| 4.- Psychosocial Care (2) | 114 | 83 | 72,8 | 31 | 27,2 |
| 5.- Legal/economic (5) | 298 | 185 | 62,1 | 113 | 37,9 |
| 6.- Security (Criminology) (1) | 53 | 40 | 75,5 | 13 | 24,5 |
| 7.- Others (Sciences, Engineering...) (10) | 503 | 220 | 43,7 | 283 | 56,3 |

## Instrument

A questionnaire consisting of 79 items was used to respond to the objectives set out. In addition, 3 items on classification variables (gender, time spent with a partner and disciplinary fields) were introduced. All of them are Likert scales (from 1-5) where 1 is not at all agree and 5 is totally agree, except the Micro-IPVAW scale whose response ranges from 0 never to 4 always:

- ASI (Ambivalent Sexism) by Expósito et al. (1998). With two dimensions, it measures ambivalent attitudes (hostile and benevolent) towards women, with 22 items ($\alpha$=.92; $\Omega$=.93).

- RSAS_20 (Acceptance of sexual violence against women) by Lotes (1991), version translated into Spanish by Sierra et al. (2007) which assesses seven different beliefs, representative of favourable attitudes towards rape, with 20 items ($\alpha$=.89; $\Omega$=.91).
- Micro-IPVAW. adapted from Ferrer et al. (2008) which provides scores for perpetration of violence (men) and victimisation (women). with 25 items ($\alpha$=.93; $\Omega$=.94).
- Finally, TRIOPE is the main diagnostic variable measured with the DD12 scale of (Jonason and Webster, 2010) translated by Nohales (2015) on the TRIOPE with 12 items, 4 items per dimension measuring Machiavellianism, subclinical narcissism and subclinical psychopathy.

The CATPCA result (varimax rotation) yields validity indicators of the three-factor structure of the TRIOPE and its reliability (Table 2). All items show loadings above .50 on their corresponding factor.

Table 2

*CATPCA model and other reliability indicators.*

| Dimensions | Items | McDonald's Ω | Cronbach's α | CATPCA Cronbach's α | Total (Eigenvalue) |
|---|---|---|---|---|---|
| Machiavellianism | 1, 2, 3, 4. | .76 | .73 | .77 | 2.696 |
| Psychopathy | 5, 6, 7, 8. | .69 | .67 | .74 | 2.378 |
| Narcissism | 9, 10, 11, 12. | .83 | .82 | .75 | 2.217 |
| TRIOPE | Total | .83 | .83 | .94 | 7.290 |

The Cronbach's Alpha obtained from the CATPCA ordinal analysis, based on the eigenvalues, is .94, with the reliability of each dimension being above .70 in this same indicator. Therefore, the scale as a whole is valid and reliable in the exploratory sense of the TRÍOPE construct validity.

We completed this analysis with Confirmatory Factor Analysis (CFA) of the already explored three-factor structure, matching the theory. After basic modelling, we obtain a parsimonious model ($\chi^2$=117, df= 43, p <.001) and with adequate goodness-of-fit indices CFI=.98, TLI=.98, SRMR=.018, RMSEA=.032, 90% CI [025, 039]. All items have loadings above .30 on their corresponding factor, with the exception of item 4 (.28). However, we have retained this and other items, despite recognising cross-factor relationships (albeit with low factor loadings), as can be seen in the path diagram of the structural model configured in Figure 1.
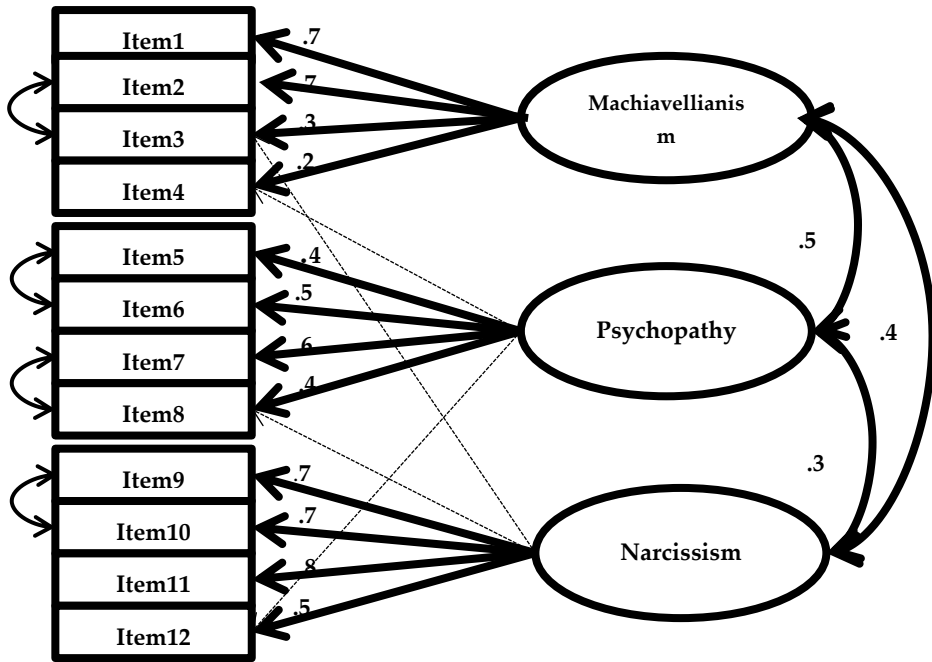
*Figure 1.* Trifactorial structure of the TRIOPE

We studied the concurrent criterial relationship between the TRÍOPE scale and other variables linked to the IPVAW field (table 3); such as: ASI (Ambivalent Sexism Inventory), Microviolence (in the intimate partner relationship) and RSAS (Sexual Violence Against Women Acceptance Attitudes). We used the Rho correlation coefficient (≥ .30) as an indicator of criterion validity.

Table 3

*Spearman's Rho correlations between the TRIOPE scale and other IPVAW variables.*

|  | Range | | M (SD) | TRIOPE | | | |
|---|---|---|---|---|---|---|---|
|  | Min | Max |  | Machiav. | Psychop. | Narcis. | Total scale |
| ASI | 22 | 101 | 41 (14.36) | .28*** | .25*** | .28*** | .34*** |
| MicroV | 0 | 86 | 9 (13.10) | .40*** | .30*** | .32*** | .44*** |
| RSAS | 20 | 81 | 28 (9.64) | .28*** | .29*** | .27*** | .34*** |

*Note: *** p < .001.*

With this result we interpret the data obtained with the TRÍOPE scale in this research as adequate and reliable, constituting a meaningful measure of self-positioning clearly related to the IPVAW field.

## Data collection and analysis procedure

At the beginning of the course, teachers are contacted and an appointment is made to administer the questionnaire in their classrooms. On the arranged day, the questionnaire is administered in paper and pencil format, which also includes a cut-out sheet to collect the signatures of the informed consent of each participant. Exploratory (CATPCA) and confirmatory (CFA) factor analyses were carried out to assess the measure and obtain reliability indicators. Both SPSS (v. 26) and *R* (using the JAMOVI 2.3.17 interface) were used to analyse the data. Finally, we applied Descriptive Analysis, Decision Trees (CART) and Cluster Analysis (k-means) to address the scientific objectives.

## Results and discussion

The global measure of the TRIOPE Scale yields global values for the sample as a whole (n = 1613) made up of the sum of the 12 items. As measures of central tendency, the median value is 20, the mean is 21.27 points ($SD = 7.03$). The free distribution of this variable shows a maximum value of 49 and a minimum of 12. As is to be expected in an extreme trait such as TRIOPE, this lowest value of the scale coincides with the mode. Therefore, a normal distribution is not to be expected in a variable such as the TRIOPE, since values between 24 and 36 are already worrying and values above 37 points are extreme values for this personality trait (Figure 2).
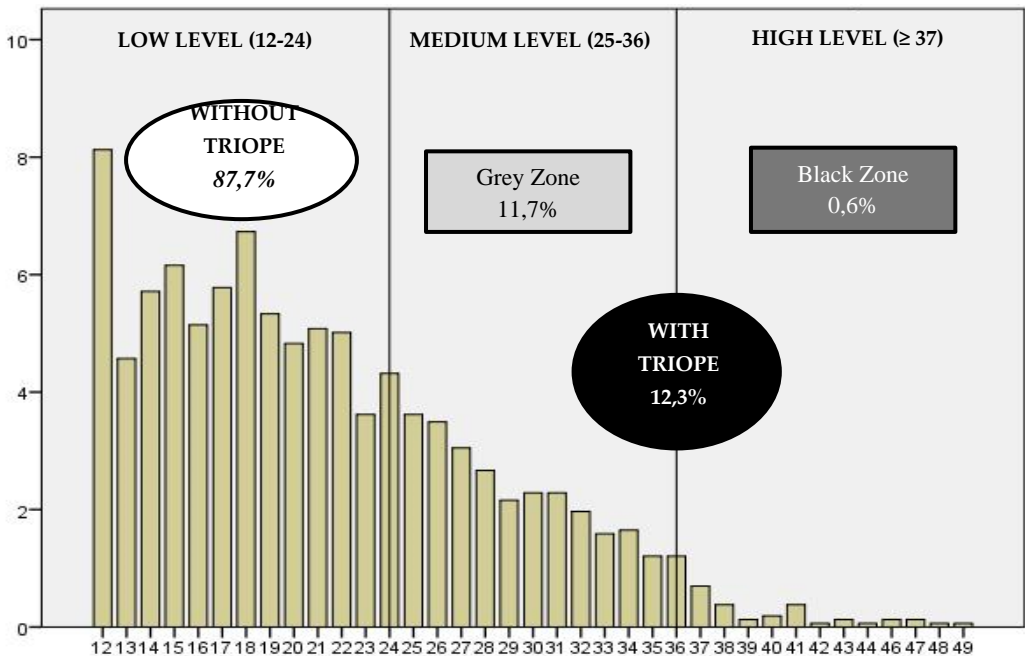


*Figure 2.* Trifactorial structure of the TRIOPE

As can be seen there is a large group (87.7%) of students free of the trait of TRIOPE, however, the remaining (12.3%) have to be considered as they place them in the risk zone.

We have made a diagnosis of the TRIOPE from the items themselves, (Figure 3) where the medium and high levels are identified with the percentage of dark area of the personality revealed in each of the items.

The sum of the average and high percentages of the TRIOPE in the items gives us a first overview of the prevalence and topicality of the problem addressed and which we have theoretically linked to the training of future professionals who may be participants in various areas of support in relation to IPVAW women victims.



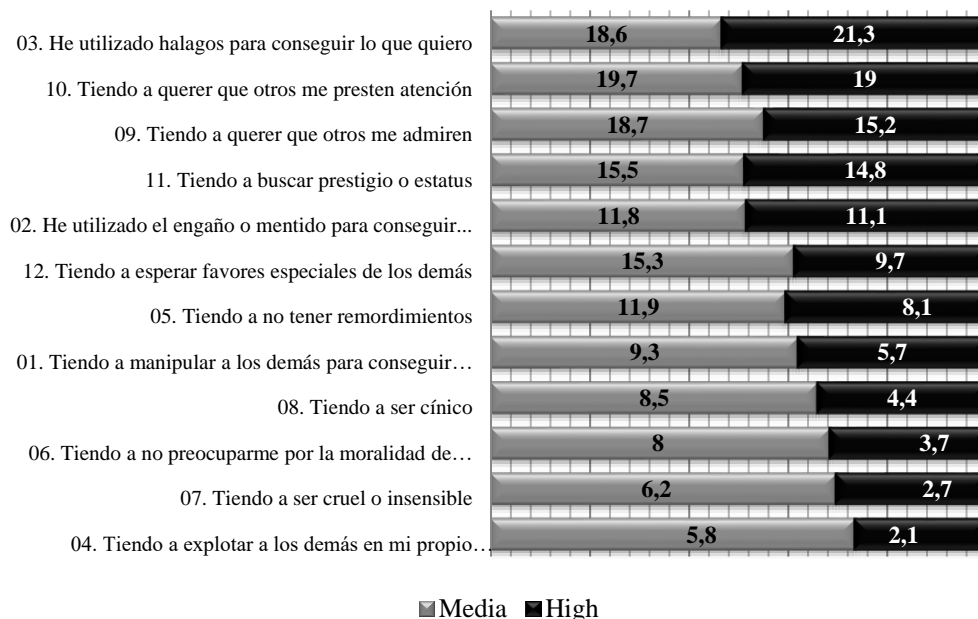| Item | Media | High |
|---|---|---|
| 03. He utilizado halagos para conseguir lo que quiero | 18,6 | 21,3 |
| 10. Tiendo a querer que otros me presten atención | 19,7 | 19 |
| 09. Tiendo a querer que otros me admiren | 18,7 | 15,2 |
| 11. Tiendo a buscar prestigio o estatus | 15,5 | 14,8 |
| 02. He utilizado el engaño o mentido para conseguir... | 11,8 | 11,1 |
| 12. Tiendo a esperar favores especiales de los demás | 15,3 | 9,7 |
| 05. Tiendo a no tener remordimientos | 11,9 | 8,1 |
| 01. Tiendo a manipular a los demás para conseguir… | 9,3 | 5,7 |
| 08. Tiendo a ser cínico | 8,5 | 4,4 |
| 06. Tiendo a no preocuparme por la moralidad de… | 8 | 3,7 |
| 07. Tiendo a ser cruel o insensible | 6,2 | 2,7 |
| 04. Tiendo a explotar a los demás en mi propio… | 5,8 | 2,1 |

■ Media  ■ High

*Figure 3*. Percentage of pupils with medium and high scores on the Triope items

As can be seen, item 3 is the most relevant (18.6% medium + 21.3% high, adding up to a dark area of 39.9%), this item is a strong indicator of the Machiavellianism dimension, indicating the pursuit of one's own goals through false flattery. In order, the next three items 10, 9 and 11 are indicators of narcissism (with high percentages in the dark area; summed medium and high respectively, 38.7%, 33.9% and 30.3%), being indicators of psychopathy the least prevalent in the sample, appearing at the bottom of the ranking.

Figures 4 and 5 below present the dark area detected and the prevalence of the trait according to each of its constituent dimensions.
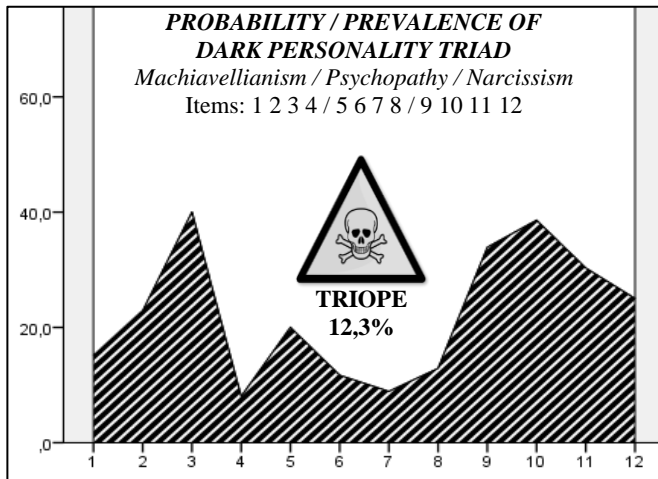


*Figure 4*. Discrimination of prevalence of TRIOPE by item (total area 12.3%).
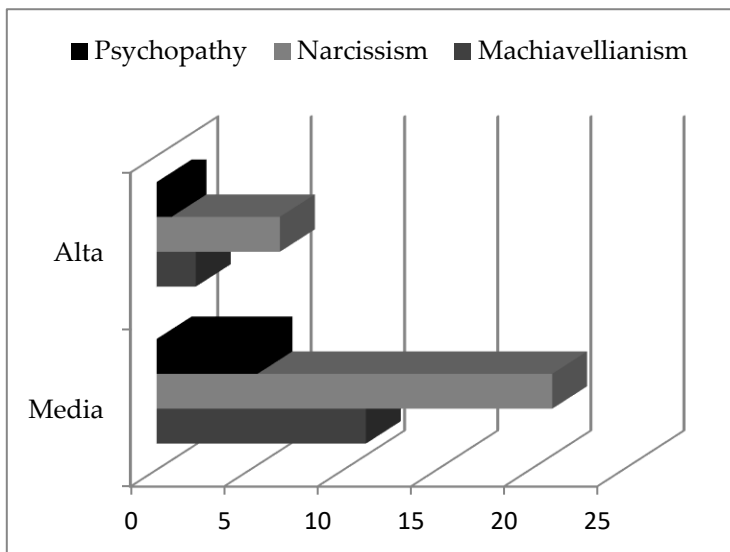


*Figure 5*. Analysis of the prevalence of TRIOPE along the three dimensions

Considering the 3 dimensions of TRIOPE, we found that narcissism is the most prevalent trait in the diagnosis of personality obscuration, followed by Machiavellianism.

These results allow us to diagnose the prevalence of TRIOPE and to analyse differences by gender and discipline.

The results can be seen in table 4, where the Security field (20.8%) has the highest levels of TRIOPE, followed by Other: Science and engineering (13.5% M and 0.4% A) and the Health field (12.1% M and 1.4% A).

Table 4.

*TRIOPE according to areas.*

| | TRIOPE LEVELS | | |
|---|---|---|---|
| **SUBJECT AREAS** | **Under** | **Medium** | **High** |
| Educational | 93.2% | 6.8% | 0% |
| Toilets | 86.4% | 12.1% | 1.4% |
| Informative-communicative | 90.4% | 9.6% | 0% |
| Psychosocial care | 88.5% | 10.6% | 0.9% |
| Legal and economic | 88.1% | 11.2% | 0.7% |
| Security | 79.2% | 20.8% | 0% |
| Other (Science, Engineering) | 86.1% | 13.5% | 0.4% |

Considering this question, but with data segregated by gender, the data indicate a higher prevalence of TRIOPE among male students (Table 5).
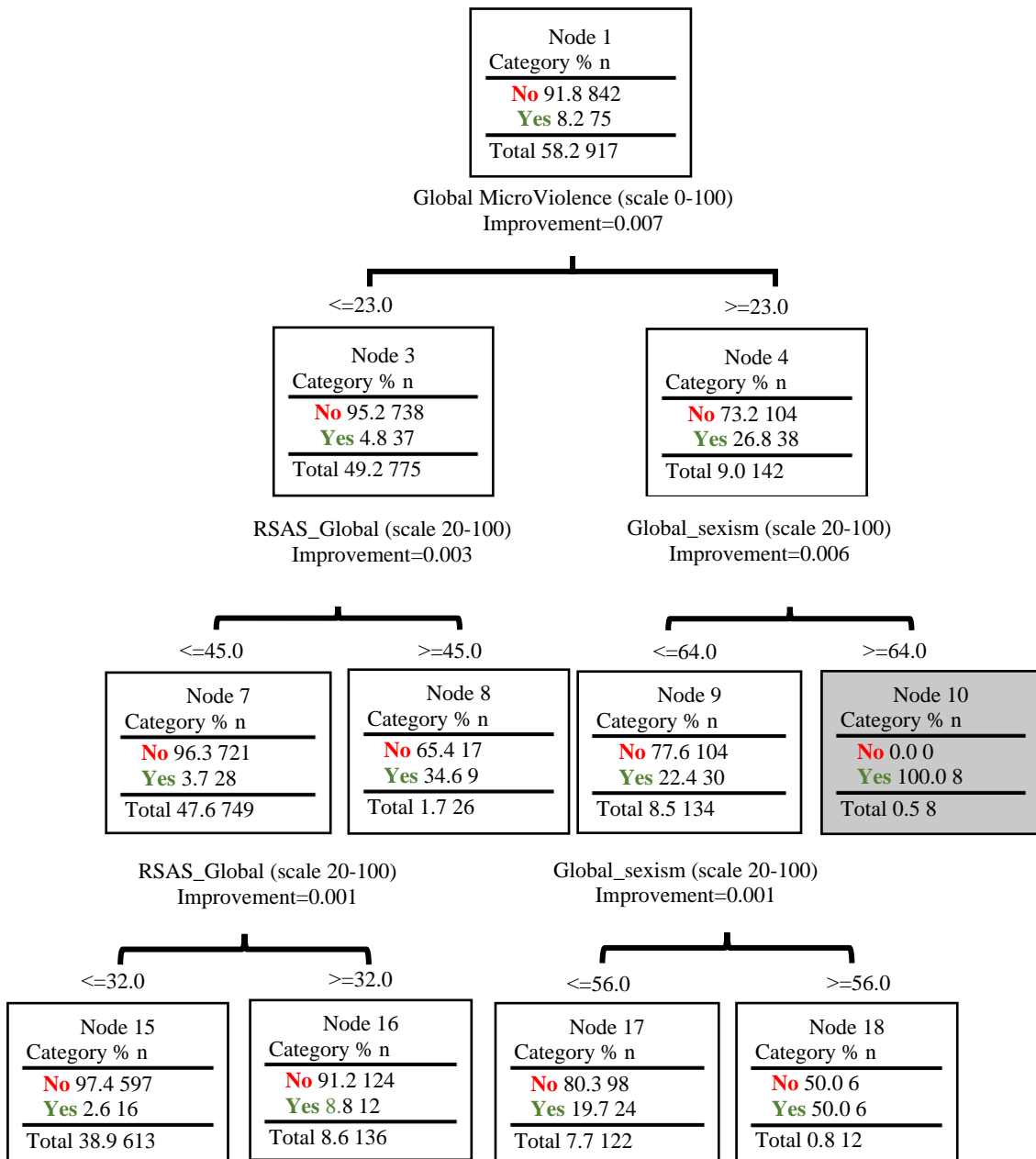
Table 5.

*Prevalence of TRIOPE by setting and gender.*

| | TRIOPE | | | | | |
|---|---|---|---|---|---|---|
| | **Female n=917** | | | **Male n=658** | | |
| | **Under** | **Medium** | **High** | **Under** | **Medium** | **High** |
| Educational | 92.8% | 7.2% | 0% | 94.4% | 5.6% | 0% |
| Toilets | 90.9% | 8.6% | 0.6% | 79.0% | 18.1% | 2.9% |
| Informative-communicative | 95.3% | 4.7% | 0% | 83.7% | 16.3% | 0% |
| Psychosocial care | 89.0% | 9.8% | 1.2% | 87.1% | 12.9% | 0% |
| Legal and economic | 92.4% | 7.1% | 0.5% | 81.1% | 18% | 0.9% |
| Security | 80% | 20% | 0% | 76.9% | 23.1% | 0% |
| Other (Science, Engineering) | 92.9% | 6.6% | 0.5% | 80.7% | 18.9% | 0.4% |

For a better insight into the prevalence of TRIOPE, a diagnostic exploration with Decision Tree has been carried out. This technique facilitates a better understanding of TRIOPE in its relationship with IPVAW, using it as a dependent and, as predictors, the variables (RSAS, Sexism and Microviolence) linked to the IPVAW field are included. In addition, gender and partner experience are introduced. Thus the likelihood or prevalence of TRIOPE is tracked by automatically identifying the interaction.

In criterion validity we have already established the relationship of the trait with these variables in the IPVAW field, now we analyse how they relate to a multilevel hierarchical analysis by applying the CART(SPSS) method that combines regression and exploratory contrast to form the best possible binary disjoint sets per level. The CART segmentation method(SPSS) applied to the sample set (nodes 30/5; estimated Risk .106/Error S. 008; with 98.4% correct classifications) gives us figures 6 and 7 by gender.

There are different levels of interpretation useful for decision making; firstly, the variables (RSAS, MicroViolence, Sexism) are shown to be more significant and discriminant than the variable (Partner experience). The latter enters the explanatory structure at a second level of the tree (we do not count the first level of gender segmentation, as is logical for a variable that implies conditioning factors and consequences differentiated by gender).

### Node 1
| Category | % | n |
|---|---|---|
| **No** | 91.8 | 842 |
| **Yes** | 8.2 | 75 |
| Total | 58.2 | 917 |

**Global MicroViolence (scale 0-100)**
Improvement=0.007

<=23.0

### Node 3
| Category | % | n |
|---|---|---|
| **No** | 95.2 | 738 |
| **Yes** | 4.8 | 37 |
| Total | 49.2 | 775 |

**RSAS_Global (scale 20-100)**
Improvement=0.003

>=23.0

### Node 4
| Category | % | n |
|---|---|---|
| **No** | 73.2 | 104 |
| **Yes** | 26.8 | 38 |
| Total | 9.0 | 142 |

**Global_sexism (scale 20-100)**
Improvement=0.006

<=45.0

### Node 7
| Category | % | n |
|---|---|---|
| **No** | 96.3 | 721 |
| **Yes** | 3.7 | 28 |
| Total | 47.6 | 749 |

**RSAS_Global (scale 20-100)**
Improvement=0.001

>=45.0

### Node 8
| Category | % | n |
|---|---|---|
| **No** | 65.4 | 17 |
| **Yes** | 34.6 | 9 |
| Total | 1.7 | 26 |

<=64.0

### Node 9
| Category | % | n |
|---|---|---|
| **No** | 77.6 | 104 |
| **Yes** | 22.4 | 30 |
| Total | 8.5 | 134 |

**Global_sexism (scale 20-100)**
Improvement=0.001

>=64.0

### Node 10
| Category | % | n |
|---|---|---|
| **No** | 0.0 | 0 |
| **Yes** | 100.0 | 8 |
| Total | 0.5 | 8 |

<=32.0

### Node 15
| Category | % | n |
|---|---|---|
| **No** | 97.4 | 597 |
| **Yes** | 2.6 | 16 |
| Total | 38.9 | 613 |

>=32.0

### Node 16
| Category | % | n |
|---|---|---|
| **No** | 91.2 | 124 |
| **Yes** | 8.8 | 12 |
| Total | 8.6 | 136 |

<=56.0

### Node 17
| Category | % | n |
|---|---|---|
| **No** | 80.3 | 98 |
| **Yes** | 19.7 | 24 |
| Total | 7.7 | 122 |

>=56.0

### Node 18
| Category | % | n |
|---|---|---|
| **No** | 50.0 | 6 |
| **Yes** | 50.0 | 6 |
| Total | 0.8 | 12 |

CART decision tree for the exploration of TRIOPE as a function of variables related to IPVAW (male branch).

**Node 2**

| Category % n | |
|---|---|
| **No** 81.9 539 | |
| **Yes** 18.1 119 | |
| Total 41.8 658 | |

RSAS Global (scale 20-100)
Improvement=0.019

<=43.0

**Node 5**

| Category % n | |
|---|---|
| **No** 88.6 484 | |
| **Yes** 11.4 62 | |
| Total 34.7 546 | |

MicroViolence (scale 0-100)
Improvement=0.004

>=43.0

**Node 6**

| Category % n | |
|---|---|
| **No** 49.1 55 | |
| **Yes** 50.9 57 | |
| Total 7.1 112 | |

MicroViolence (scale 0-100)
Improvement=0.006

<=10.0

**Node 11**

| Category % n | |
|---|---|
| **No** 92.4 322 | |
| **Yes** 5.8 20 | |
| Total 21.7 342 | |

>=10.0

**Node 12**

| Category % n | |
|---|---|
| **No** 79.4 162 | |
| **Yes** 20.6 42 | |
| Total 13.0 204 | |

<=37.0

**Node 13**

| Category % n | |
|---|---|
| **No** 60.0 51 | |
| **Yes** 40.0 34 | |
| Total 5.4 85 | |

>=37.0

**Node 10**

| Category % n | |
|---|---|
| **No** 14.8 4 | |
| **Yes** 85.2 23 | |
| Total 1.7 27 | |

Duration of partnership in
years
Improvement=0.001

Global_Sexism (scale 22-110)
Improvement=0.001

<=Up to 6 months

**Node 19**

| Category % n | |
|---|---|
| **No** 76.4 120 | |
| **Yes** 23.6 37 | |
| Total 10.0 157 | |

>=Up to 6 months

**Node 20**

| Category % n | |
|---|---|
| **No** 89.4 42 | |
| **Yes** 10.6 12 | |
| Total 3.0 54 | |

<=53.0

**Node 21**

| Category % n | |
|---|---|
| **No** 90.0 9 | |
| **Yes** 10.0 1 | |
| Total 0.6 10 | |

>=53.0

**Node 22**

| Category % n | |
|---|---|
| **No** 56.0 42 | |
| **Yes** 44.0 33 | |
| Total 4.8 75 | |

CART decision tree for the exploration of TRIOPE as a function of variables related to IPVAW
(female branch).

The first variable that significantly segments the group of men is the RSAS attitude, whose cut-off value is 43 points (scale 20-100), while in women the main interaction with TRIOPE is determined by having suffered micro-violence in their partner relationship, whose cut-off value is 23 points (scale 0-100). The second level of significant interaction in the group of men is marked by experiencing micro-violence in the relationship, whose cut-off value is 37 points (scale 0-100), while in women it is the degree of sexist beliefs with a cut-off point of 64 (scale 22-110).

Subgroups with a maximised prevalence or probability of TRIOPE have been identified, as is the case of node 14 in the male branch, made up of those who show pro-rape attitudes and exercise intimate partner micro-violence, in which the prevalence of TRIOPE rises to 85.2% (from the initial 18.1%). Also node 10 in the female branch, made up of women who experience intimate partner micro-violence and display sexist attitudes, raising the prevalence of TRIOPE to 100% (from the initial 8.2%).

This seems to indicate that a high degree of acceptance of sexist beliefs and having experienced violence correlates with high levels of TRIOPE in women, while men with high scores on rape attitudes and experiencing micro-violence in intimate partner relationships are associated with high levels of TRIOPE. The likelihood of the trait increases in men with intimate partner experiences of less than 6 months or no intimate partner relationships.

Finally, the Cluster Analysis (k-means), introducing TRIOPE together with the complementary variables IPVAW (Microviolence, ASI, RSAS), yields as the most plausible result a model of 4 clusters, well differentiated in all variables (ANOVA), respectively, $F(3)=1084.51$, $p<.01$, $d=3.42$, $F(3)=1148.16$, $p<.01$, $d=3.23$, $F(3)=570.52$, $p<.01$, $d=2.86$.

We have represented the 4 groups in the plane formed by the trait level of the TRIOPE and the level of IPVAW Microviolence (Figure 8), which allows us to show the existence of a group (G4) of 90 cases (5.60%) that combines high coordinates on both axes (high level of Microviolence in the couple relationship and high level of TRIOPE), which would be the most notable target of this diagnosis.

This group includes the majority of cases with TRIOPE traits (59.80%) although there is another group that also stands out (G3) with 221 cases (13.7%), with medium levels of Microviolence and TRIOPE, this group includes another 16% of cases with TRIOPE traits. Likewise, we can identify the group of cases with low levels of both variables (G1), which is the largest (n=824; 51.1%), including only 4% of cases with TRIOPE.

Lastly, we highlight the group (G2) that includes a certain level of trait TRIOPE, without being linked to the presence of intimate partner microviolence, which indicates that 16.1% of the cases diagnosed with average levels of TRIOPE have not experienced IPVAW.
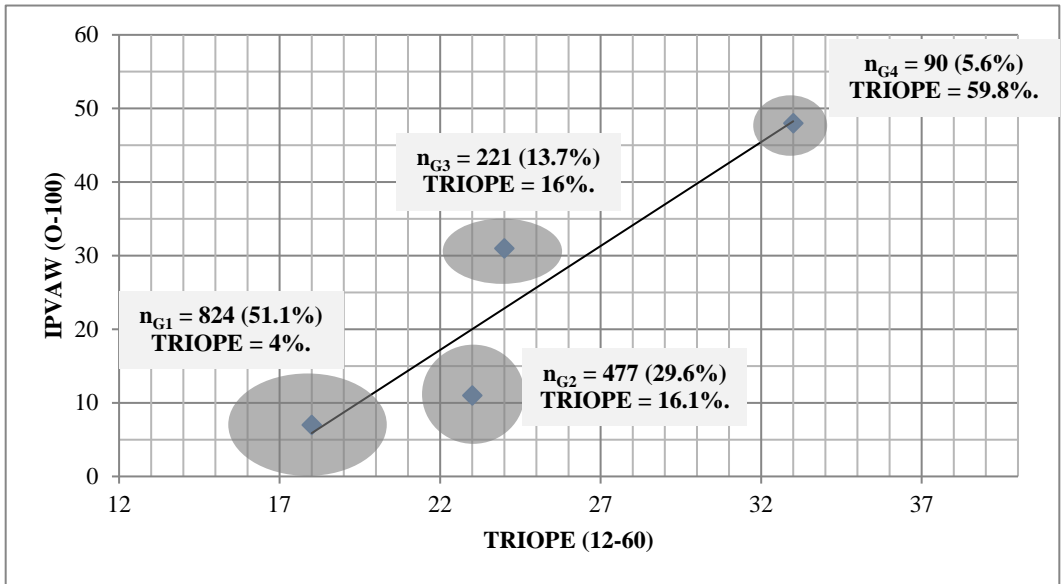
*Figure 8*. Representation of the clusters according to the relationship with micro-IPVAW

Following the analyses carried out, the objectives set out in this research have been met. It has been detected that the group of university students who are in the risk zone amounts to 18.1% in men (figure 6) and 8.2% in women (figure 7), which means that 860 students enter the university each year with medium or high levels, a fact to be taken into account because we are training professionals who, in the future, their practice may be linked to victims of IPVAW.

From the analysis of the items and considering the 3 dimensions of the TRIOPE, we have determined that narcissism is the most prevalent factor among students, followed by Machiavellianism and psychopathy, although when all 3 dimensions are present, a dark personality is configured that facilitates and instrumentalises the IPVAW process. In terms of disciplinary fields, we are concerned about professions related to security, followed by those in the healthcare field.

After the Cluster analysis carried out, it has been possible to observe the existence of groups (G4 and G3) whose sum total is 311 cases representing 19.3% of the student body, which present medium and high levels in both Microviolence and TRIOPE, with the consequences that this implies for people who in the future may develop professions that, directly or indirectly, are related to the field of gender-based violence. On the other hand, we find a large group of 1301 students, representing 67.2%, who present low average levels in the two axes taken into account, Microviolence and TRIOPE.

This justifies that we have to pay special attention to these areas and that the Men's map (TRIOPE-IPVAW) is especially monitored (figure 9), while the Women's map (TRIOPE-IPVAW) is linked more to the immediate prevention of intimate partner violence which, according to this diagnosis, 1.5% and 10.1% of women are suffering occasional violence at an extreme and permanent level, since women are the victims of IPVAW, not

the perpetrators of IPVAW. This aspect should be evaluated from the point of view of the prevention protocols of the Equality Units of the universities, considering that the TRÍOPE in women is associated (Rho=.42) with the victimisation of micro-IPVAW.
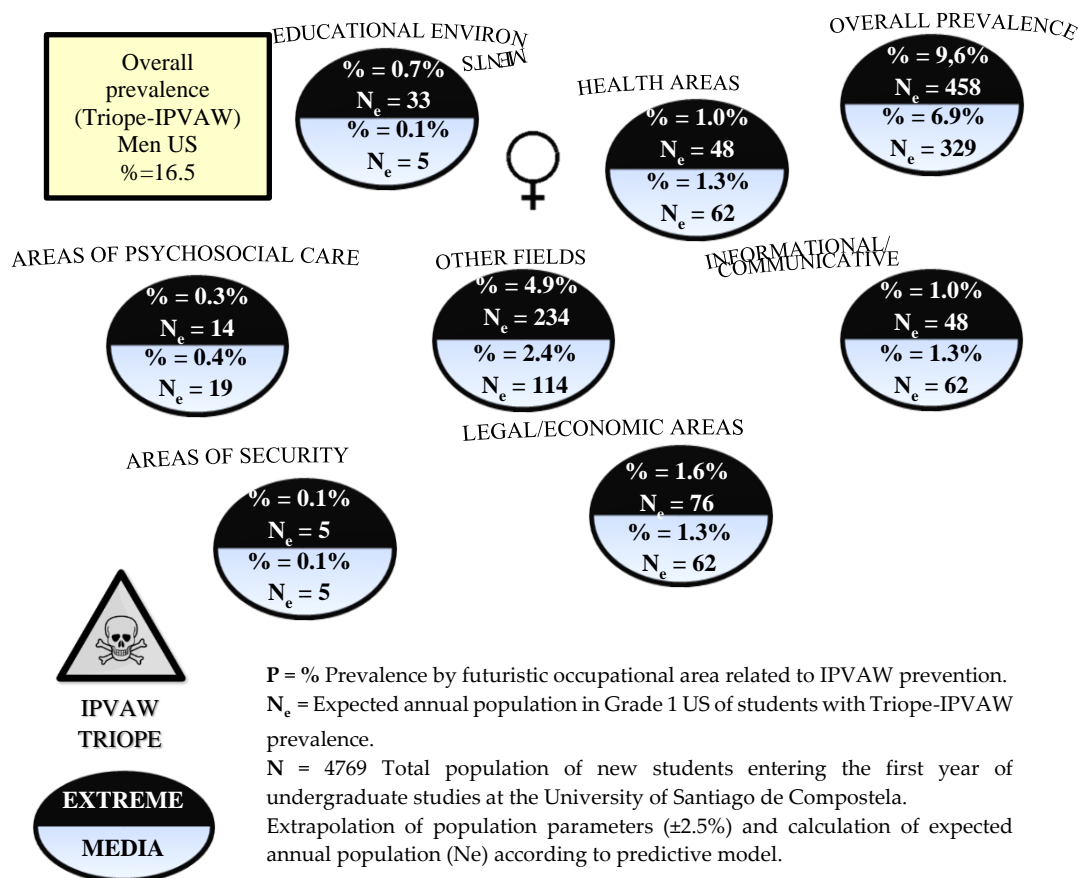


*Figure 9*. Prevalence map of TRIOPE-IPVAW prevalence in men.

In the case of men, the level of TRIOPE is associated (Rho=.48) with the perpetration of micro-IPVAW. Obviously, the university's institutional response to this group of men who are being trained at university, in disciplinary areas linked to future professional fields related to the prevention of IPVAW, must be specific and forceful. Universities must act to prevent these students from reaching their professional activity without due preparation in gender equality. Also, to promote and address psychotherapeutic programmes for the healing of these extreme tendencies of the patriarchal, sexist personality, which now show themselves in an indirect way and which can worsen and extend to future professional life in the form of errors in dealing with victims of IPVAW.

## Conclusions

The conclusions allow us to highlight some answers to the research problem. On the one hand, 1) we know the prevalence of TRIOPE in Higher Education (University of Seville), ordering the Degree qualifications according to their link to professional treatment with victims/survivors of gender violence; and, on the other hand, 2) the degree of association of TRIOPE with IPVAW Orientation is demonstrated, with divergent causal-dynamic influence according to gender.

Segregating especially the male students, we have recognised their prevalence map by future professional areas; something key, given that these men with very distorted personalities and thoughts about violence and women may in the future develop professions that, directly or indirectly, are related to the care of women who are suffering or have suffered IPVAW. This knowledge is important because the presence of TRIOPE in these professionals, especially in the male gender and even more so if it also coincides with distorted gender thinking, can have a very negative impact on the care and support provided to victims/survivors (García-Pérez and Rodríguez-López, 2021).

The acknowledged persistence of this orientation towards violence against women in today's Spanish youth (Aguaded, 2017; Esteban and Fernández, 2017; García-Pérez and Rodríguez-López, 2021) could, if the inertia is not corrected, carry over into subsequent professional mistakes, perhaps, in the worst case, contributing to the maintenance of "the route of violence" against women. Other research points to the social reproduction of gender-based violence by both men and women (Villagrán et al., 2020) and towards the importance of researching it, as Rollero (2020) points out, "IPVAW, because of its prevalence and harmful consequences, has been defined as the most important public health problem and underlines the need for more research from a socio-ecological perspective, especially considering social and cultural influences" (p. 749); in this regard, De Alencar and Cantera (2013) add the "psychological and institutional aspects" (p. 96).

Knowing the prevalence map of the TRÍOPE-IPVAW combination in men, it is worth proposing measures for change and monitoring their application and results, in order to prevent expected difficulties, as is currently the case with the path initiated by universities towards a gender-sensitive curriculum, an effort aligned with Sustainable Development Goal (SDG) number 5 established by the United Nations. In this process, universities can be aware of and use these conclusions aimed at preventing the cognitive and personality conditions of students in order to provide a response from Higher Education, especially its teaching staff. Therefore, it is clear that there is a need to implement training policies aimed at university teaching staff. It is worrying that many university teachers still hold the belief that gender equality has been fully achieved in the classroom, which underestimates the persistence of gender-based violence. In this sense, it is crucial to provide training and awareness-raising opportunities for university faculty to effectively address gender-based violence and promote a culture of equality in the higher education environment. These training policies should address both theoretical knowledge and practical strategies to prevent and respond to gender-based violence, as well as the development of a gender-sensitive curriculum.

It is also important to evaluate the real impact of the activities and projects carried out in universities. Sometimes, these initiatives can remain mere anecdotes, without a significant impact on the prevention and eradication of gender-based violence. Therefore,

a critical and comprehensive analysis is required to identify areas for improvement and to strengthen existing interventions. In order for teachers to be able to implement quality higher education, based on equality and curricular innovation, it is essential that they have not only their professionalism and experience, but also a solid training that provides them with the necessary competences to face the challenge of training professionals capable of participating effectively in the prevention and care of victims of gender-based violence. To achieve this, a diverse and comprehensive training offer is needed to meet the specific needs of gender-based violence training, especially on IPVAW. This implies the availability of specialised programmes and courses, as well as the integration of relevant content into the curricula of different university disciplines.

With this overview, the involvement of universities is essential and it is up to the existing Equality Units in all Spanish Universities to guide the process. These can not only attend to socio-cultural and relational aspects of gender, but also consider the appropriation of this type of individual traits in the training of future professionals working with victims of IPVAW. In coordination with the Prevention Service, a procedure could be articulated to implement preventive and formative interventions aimed at these people, with the objective of challenging and modifying attitudes and beliefs that could perpetuate violence. Finally, it is worth pointing out towards alternatives for the university treatment of these students who, when their traits are very extreme, can be considered "special". As García-Pérez and Rodríguez-López (2021) point out, this type of student will not respond well to standard curricular approaches and represents an institutional challenge that should perhaps be addressed with psychosocial programmes.

We are aware of certain limitations in the study that must be taken into account. Thus, firstly, due to the search for a representative sample within the university, we have limited ourselves to the University of Seville, which could limit the generalisability of the results, but not the internal validity of the diagnosis to prevent certain behaviours, thus identifying groups and areas of risk that require specific actions. However, it should be borne in mind that the sample is sufficiently representative of all professional fields related to IPVAW.

Another limitation that is reasonable to recognise is the exclusive dedication in this study to students with the TRIOPE personality trait, a very small part of the group of students affected by ideas or doubts about gender (and within this, only linked to IPVAW), with 60% of students who, without the personality trait studied here, also present distorted thoughts about gender. In order for universities to plan an educational and institutional response to the conditioning factors of students' gender educability, other traits that also recognise the diversity of the student body in the construction of gender should be involved alongside this trait.

In future research we plan to analyse factors that influence the gender educability of students, their flexibility to cognitive gender change and how to overcome patriarchal myths and neo-myths that are still circulating in the 21st century. We see the need to address the construction of gender in Higher Education from a micro-genetic perspective, moment by moment, to learn how to change, step by step, some ways of thinking; even if it is on a very small scale, through formative micro-experiments that work on gender competence in situated problems. As Willie and Kershaw (2019) point out, [all] "changes that occur to alleviate gender inequity help reduce instances of gender-based violence and improve the well-being and livelihoods of women and girls." (p.257).

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