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## Eysenck personality questionnaire (EPQ-A) personality traits and PCL-R Psychopathy levels in women prisoners

Cuestionario de personalidad de Eysenck (EPQ-A) de rasgos de personalidad y PCL-R para niveles de psicopatía en mujeres reclusas

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### ABSTRACT:

The main objective of this study was to establish the existence of a relationship between the psychoticism scale and the psychopathy levels of the PCL-R, determining the presence of associations between these two scales in women deprived of liberty. A descriptive and correlational type of research with a quantitative approach was adopted. The sample was formed from the analysis of the files of 116 women deprived of liberty in the Turi Prison in the city of Cuenca, Ecuador. The results show a high correlation between the two instruments used: PCL-R and EPQ-A, although there were variations according to age and marital status. No relationship was found between the variables of both instruments when they were crossed with schooling and type of crime. For the most part, and as a conclusion, the results coincide with the literature.

**KEYWORDS:** Psychopathy, Personality, Psychoticism, Women, Crime.

### RESUMEN:

El objetivo principal de este estudio fue establecer la existencia de una relación entre la escala de psicoticismo y los niveles de psicopatía del PCL-R, determinando la presencia de asociaciones entre estas dos escalas en mujeres privadas de libertad. Se adoptó un tipo de investigación descriptiva y correlacional con un enfoque cuantitativo. La muestra se conformó a partir del análisis de los expedientes de 116 mujeres privada de la libertad de la Cárcel del Turi de la ciudad de Cuenca en Ecuador. Los resultados muestran una alta correlación entre los dos instrumentos utilizados: PCL-R y EPQ-A, aunque hubo variaciones según la edad y el estado

civil. No se encontró relación entre las variables de ambos instrumentos cuando se cruzaron con la escolaridad y el tipo de delito. En su mayor parte, y como conclusión, los resultados coinciden con la literatura.

**PALABRAS CLAVE:** Psicopatía, Personalidad, Psicoticismo, Mujeres, Crimen.

## INTRODUCTION

The concept "psychopathy" has its origin in Benjamin Rush in two works, one in 1786 and the other in 1812, establishing a conceptual axis that deals with a congenital disorder of a moral type that has to do with the lack of ability to distinguish between the good and evil<sup>1-3</sup>. The meaning of Pinel<sup>4</sup> to refer to psychopathy as "delirium without mania" is known. Schneider<sup>5</sup> came to distinguish ten types of psychopathy. Cleckley's initial criteria<sup>6</sup> is the appearance of external abnormality, under the benefit of punishment and social control, and not necessarily criminal behavior as a definition of the disorder. However, terminological confusion, problems in defining behavior as dimensional or categorical, and different criteria have dominated the history of a highly questioned disorder in its existence. It is important to note that according to the manual of the Hare Psychopathy Checklist-Revised (PCL-R) instrument, the term psychopathy refers to a personality disorder, which is attributed to those subjects who present socially deviant personalities and behavior.

This manual has divided the features and characteristics of psychopathy into two factors, an interpersonal-affective sphere, and another social deviance<sup>7</sup>. Regarding the interpersonal-affective part, these individuals show superficial affection. The relationships that they manage to establish with their partner are ephemeral because they get bored quickly; next, we have the interpersonal part in which the only and true interest that psychopaths show is towards themselves (egocentric); Finally, their behavior in society is very irregular, it tends to violate the norms and rules that the environment establishes, they are impulsive and constantly seek to satisfy their pleasures<sup>7</sup>. On the other hand, concerning the social deviance factor and the antisocial facet, we can describe the behavioral pattern of the subject as a constant need for stimulation or a tendency to boredom, a parasitic lifestyle, lack of realistic long-term goals, impulsivity, and irresponsibility, poor self-control of behavior, behavior problems in childhood, criminal versatility, revocation of probation and juvenile delinquency.

In another instance, psychopathy has difficulties in distinguishing and differentiating between good and evil. Due to this, the behavior of subjects with psychopathy is dictated by their most desired impulses and needs.. This is one of the main reasons why these subjects constantly get involved in severe problems, be they social, affective, or cognitive.

In the subsequent study, we will focus on female psychopathy due to the paucity of recent studies. Commonly, or more frequently, this disorder is present in the male gender, influencing, among other aspects, the blood level of testosterone, consistently related to a greater probability of presenting aggressive behaviors<sup>8,9</sup>.

The high prevalence of men involved in criminal behavior compared to the figures for female crime allow us to affirm that female crime is low<sup>10-12</sup>. However, it should be noted that there are no significant differences if we compare the constructor of psychopathy between men and women<sup>13</sup>.

Indeed, it has been the male population that has made it possible to establish certain traits and behaviors typical of psychopathy. Although it is clear that it is homogeneous, it must be emphasized that factor 2 (impulsive - antisocial traits) is more substantial in men<sup>14</sup>. Thus, it has been found that men tend to be more aggressive while women tend to minimize these behaviors<sup>15</sup>.

However, the predominant characteristic of female psychopathy is manipulation, which is especially evident in verbal abuse and neglect in parenting, and which is also correlated with drug use<sup>11</sup>. On the other hand, male psychopaths generally exercise physical violence. Their action is behavioral, but this does not rule

out the possibility that psychopathic women can physically attack the same level as the opposite sex<sup>16</sup>. It should also be noted that psychopathic women experience more significant emotional problems than men. Due to this, they have high levels of anxiety, depression, stress, etc.<sup>10</sup>. In this way, the evidence allows us to affirm those specific characteristics are more evident in the female population, such as anxiety, nervousness, and other neurotic manifestations. At the same time, male psychopaths appear to be relatively free of anxiety and related symptoms<sup>7,12</sup>.

On the other hand, it is essential to highlight that the highest means of violence are found in female offenders, while men have higher sexual crimes<sup>7,17-19</sup> than women. "Epidemiological, ethnographic and crime statistics tell us that every day more women have been involved in the following processes: violent acts and crime"<sup>12</sup>. However, the scientific and legal recognition of an adequate diagnosis of psychopathy is essential in the psychometric field, since to date, there is little information on these issues in women<sup>10,20-22</sup>.

From the scientific field, it is necessary to promote and support, in this sense, the development of investigations that try to address the resolution of the main concerns, controversies, and knowledge gaps about psychopathic women in the areas of clinical, legal, and forensic psychology<sup>23</sup>. The assumption persists in academic spaces that men tend to be more involved in crimes than women. In the same way, violent, antisocial, and psychopathic behaviors are considered masculine rather than feminine issues<sup>24</sup>. This gender difference, among others, goes back through geographical regions, historical periods, socioeconomic extracts and continues to appear as a foundation in current research.

Studies that address violence in psychopathic women have hardly dealt with the formulation of diagnostic and treatment criteria, mainly due to the absence of precise concepts and their complex application to manifestations of violent and psychopathic behavior concerning the field criminal<sup>25</sup>. Indeed, although researchers have been able to identify the manifestations of violent behavior, the specificities of violence carried out by women (type, areas, relationship of crime) are unknown<sup>26</sup>; likewise, the findings on the characteristics, symptoms, and behaviors of psychopathy<sup>12</sup>.

Several instruments have been developed to analyze and measure the manifestations of psychopathy. One of the best known is the Psychopathy Checklist-Revised (PCL-R) created by Hare., which was constructed from the male population, and few studies have been done to explore its validity in the female population<sup>27</sup>.

This study aims to establish a relationship between the psychoticism scale and the levels of psychopathy of the PCL-R in women deprived of liberty, determining the presence of associations between these two scales.

## METHODOLOGY

A non-experimental, cross-sectional, descriptive-correlational, and quantitative approach study was carried out. The sample consisted of 116 female persons deprived of liberty for committing various crimes (illicit trafficking of substances subject to control, robbery, murder, homicide, kidnapping, fraud, illicit association, and organized crime), whose ages were between 18 and 63 years (mean 33.67, SD = 10.05). Regarding marital status, 62 (53.4%) were single, 32 (27.65%) were married, 16 (13.8%) reported maintaining a common-law status, 3 (2.6%) widows, and 3 (2.6%) separated or divorced. Regarding education, it was distributed as follows: primary level 88 (75.9%), secondary level 24 (20.7%), and third-level 4 (3.4%). The studied population reported that before being deprived of liberty, 44 (37.9) had no occupation, 17 (14.7%) were merchants, 36 (32.7%) were private employees in craft trades, 3 (2.6%) were sex workers, 11 (9.5%) housewives, 2 (1.7%) vehicle safety and 1 (0.9%) third-level student.

### Procedure

Initially, in this research, the objectives were established with the people deprived of liberty, emphasizing ethical guarantees, anonymity, confidentiality, being able to leave the study when they have it, and that the

results do not affect their status. Penitentiary or negative results are anticipated. All the people signed the informed consent. For data collection, the files of people in prison were used, with the prior authorization of the director of the Penitentiary entity and the consent mentioned by the participants, according to the Helsinki protocol. The population consisted of 198 people deprived of liberty in the women's ward. One hundred fifty-eight agreed to participate. However, 42 studies were discarded due to inconsistencies such as not having a file or collateral information, low predisposition to attend the interview or randomly filling out the questions and abandoning the study. As inclusion criteria, the following were considered: being between 18 and 64 years old, not suffering from any serious medical or psychological condition that prevents the normal development of mental functions, not suffering from psychosis, mental retardation, intellectual disability, alterations in motor or perception limits that limit the assessment. The study was divided into two phases. The first consisted of the delivery of the informed consents, explanation, and signature thereof. Subsequently, they were given the Eysenck Personality Questionnaire (EPQ-A) in their original version with Spanish variation and applied collectively, considering the hours in which the people deprived of their liberty were in the pavilion's courtyard. For the second phase, a review of files or collateral information was carried out, continuing with the semi-structured interview of the PCL-R, to end with the summation of the 20 items that this test covers in its original version.

### Instruments

The EPQ-A personality questionnaire was used to measure the main dimensions of personality, extraversion, neuroticism, psychoticism, and truthfulness<sup>28</sup>. It allows describing people according to the degree of extraversion, neuroticism or psychoticism, and Sincerity. The instrument to be used is the original test obtained from the Laboratory of Psychometry and Cognitive Neurosciences of UCACUE. It consists of 83 selective response items (yes-no). On the other hand, the Psychopathy Checklist-Revised (PCL-R) Scale is an international reference instrument used to evaluate psychopathy in prison populations and clinical and forensic practice<sup>7</sup>. It is a semi-structured interview that evaluates personality traits related to psychopathy. The scale comprises twenty items that, after compiling the information and reviewing the files, allow scoring from 0 to 2 points, considering that 0 does not apply, one applies in certain circumstances, and two applies entirely to the evaluated subject. The test has an absolute value of 40 points and based on the manual and several studies; point 30 has been used as the cut-off for psychopathy<sup>29</sup>. The PCL-R was used in its original version.

### Statistical analysis

Descriptive, correlational, and association statistics were performed in the statistical analysis. The original licensed SPSS 26 statistical package (S/N: 59326190518) was used for them. To establish correlations between data it was applied the Pearson correlation test, a  $P \leq 0.05$  was considered significant. Univariate analysis was performed using absolute and relative frequencies (qualitative variables) and summary measures were used for quantitative variables. Subsequently, a normality test was performed using the Shapiro Wilk test. Finally, Spearman's coefficient was used for the correlation between quantitative variables.

## RESULTS

Based on the EPQ-A personality test, a mean percentile of 44.31 was found for the Neuroticism scale, 78.96 for Psychoticism, 61.03 for Extraversion, and 34.71 for Sincerity, while on the PCL- scale. R the mean that was found was 12.38 in raw score. According to the psychopathy interpretation table determined by the PCL-R manual, 44% of the population presented a very low score; 20.7% low; 26.7% moderate; 6.9% high, and 1.7% very high.

TABLE 1  
Sociodemographic Characteristics of the Sample

| Table 1. Sociodemographic Characteristics of the Sample |                      | <i>f</i>   | %          |
|---------------------------------------------------------|----------------------|------------|------------|
| <b>AGE</b>                                              | 18 - 27              | 35         | 30.2       |
|                                                         | 28 - 37              | 46         | 39.7       |
|                                                         | 38 - 47              | 23         | 19.8       |
|                                                         | 48 - 63              | 12         | 10.3       |
| <b>Civil status</b>                                     | Single               | 62         | 53.4       |
|                                                         | Married              | 32         | 27.6       |
|                                                         | Free Union           | 16         | 13.8       |
|                                                         | Widow                | 3          | 2.6        |
|                                                         | Separated / Divorced | 3          | 2.6        |
| <b>Instruction</b>                                      | Primary              | 88         | 75.9       |
|                                                         | Secondary            | 24         | 20.7       |
|                                                         | Third Level          | 4          | 3.4        |
| <i>Total</i>                                            |                      | <i>116</i> | <i>100</i> |

The majority age group is between 28 and 37 years old (39.7%), the most frequent marital status being single (53.4%) and the level of primary education (75.9%).

TABLE 2  
Correlation of PCL-R Psychopathy with EPQ-A Personality Scales

|                     | <b>Neuroticism</b> | <b>Extraversion</b> | <b>Psychoticism</b> | <b>Sincerity</b> |
|---------------------|--------------------|---------------------|---------------------|------------------|
| <b>Total, PCL-R</b> | <b>0.240**</b>     | -0.059              | <b>0.406**</b>      | 0.179            |
| <i>p</i>            | 0.010              | 0.528               | 0.000               | 0.054            |
| <b>Neuroticism</b>  | 1                  | -0.044              | <b>0.461**</b>      | <b>0.618**</b>   |
| <i>p</i>            |                    | 0.642               | ,0001               | 00001            |
| <b>Extraversion</b> |                    | 1                   | -0.170              | -0.016           |
| <i>p</i>            |                    |                     | 0.068               | 0.865            |
| <b>Psychoticism</b> |                    |                     | 1                   | <b>0.406**</b>   |
| <i>p</i>            |                    |                     |                     | 0.0001           |
| <b>Sincerity</b>    |                    |                     |                     | 1                |
| <i>p</i>            |                    |                     |                     |                  |

As shown in Table 2, there is a high positive and statistically significant correlation between the total score of the PCL-R and the Psychoticism scale of the EPQ-A, obtaining a correlation value of 0.40 ( $p > 0.01$ ), which indicates a commonality between both measures. The correlation between the total PCL-R score and neuroticism is positive and statistically significant (0.24,  $p > 0.01$ ).

TABLE 3  
Correlation of the PCL-R with direct scores and percentiles, according to age

Table 3. Correlation of the PCL-R with direct scores and percentiles, according to age.

|                         |              | Edad           |               |         |               |
|-------------------------|--------------|----------------|---------------|---------|---------------|
|                         |              | 18 - 27        | 28 - 37       | 38 - 47 | 48 - 63       |
|                         |              | PCL-R          |               |         |               |
| Neuroticism             | r de Pearson | 0.320          | 0.098         | 0.081   | 0.552         |
|                         | p            | 0.061          | 0.516         | 0.714   | 0.063         |
| Neuroticism Percentile  | r de Pearson | <b>0.338*</b>  | 0.062         | 0.083   | <b>0.629*</b> |
|                         | p            | 0.047          | 0.683         | 0.707   | 0.028         |
| Extraversion            | r de Pearson | -0.027         | -0.277        | 0.073   | 0.403         |
|                         | p            | 0.877          | 0.062         | 0.742   | 0.194         |
| Percentile Extraversion | r de Pearson | -0.027         | -0.278        | 0.049   | 0.466         |
|                         | p            | 0.879          | 0.062         | 0.826   | 0.126         |
| Psychoticism            | r de Pearson | <b>0.638**</b> | <b>0.354*</b> | 0.252   | 0.185         |
|                         | p            | 0.000          | 0.016         | 0.246   | 0.566         |
| Percentile Psychoticism | r de Pearson | <b>0.487**</b> | <b>0.327*</b> | 0.388   | 0.117         |
|                         | p            | 0.003          | 0.027         | 0.067   | 0.716         |
| Sincerity               | r de Pearson | <b>0.336*</b>  | 0.028         | 0.270   | 0.092         |
|                         | p            | 0.048          | 0.855         | 0.213   | 0.777         |
| Sincerity Percentile    | r de Pearson | <b>0.360*</b>  | -0.030        | 0.286   | 0.090         |
|                         | p            | 0.034          | 0.844         | 0.186   | 0.780         |
| Total                   |              | 35             | 46            | 23      | 12            |

Statistically, significant correlation values occur to a greater extent for the age range of 18 to 27 years in the relationship between the total of the PCL-R and the different factors of the EPQ-A. The highest value is found between psychoticism and the total PCL-R score (0.63,  $p < 0.00$ ). In the range between 28 and 47 years, only a statistically significant and positive correlation was found between psychoticism and PCL-R with a value of 0.35 ( $p < 0.05$ ). In the age range from 48 to 63 years, there is a very high positive and statistically significant correlation, with a value of 0.63 ( $p < 0.05$ ) between neuroticism and total PCL-R.



TABLE 4.  
Correlation of the PCL-R with direct scores and percentiles, according to Marital status

Table 4. Correlation of the PCL-R with direct scores and percentiles, according to Marital status

|                         |              | <i>Civil Status</i>        |                     |
|-------------------------|--------------|----------------------------|---------------------|
|                         |              | Single, widowed, Separated | Married, Free Union |
|                         |              | PCL-R                      |                     |
| Neuroticism             | r de Pearson | <b>0.269*</b>              | 0.151               |
|                         | p            | 0.027                      | 0.304               |
| Neuroticism Percentile  | r de Pearson | <b>0.255*</b>              | 0.156               |
|                         | p            | 0.036                      | 0.288               |
| Extraversion            | r de Pearson | 0.004                      | -0.147              |
|                         | p            | 0.975                      | 0.320               |
| Percentile Extraversion | r de Pearson | -0.014                     | -0.128              |
|                         | p            | 0.910                      | 0.386               |
| Psychoticism            | r de Pearson | <b>0.491**</b>             | 0.223               |
|                         | p            | 0.0001                     | 0.128               |
| Percentile Psychoticism | r de Pearson | <b>0.459**</b>             | 0.215               |
|                         | p            | 0.0001                     | 0.142               |
| Sincerity               | r de Pearson | <b>.269*</b>               | 0.042               |
|                         | p            | 0.027                      | 0.776               |
| Sincerity Percentile    | r de Pearson | <b>.261*</b>               | 0.028               |
|                         | p            | 0.031                      | 0.852               |
| Total                   |              | 68                         | 48                  |

Regarding marital status, a positive and statistically significant correlation with a value of 0.49 ( $p < 0.001$ ) stands out between the total score in PCL-R and psychoticism in single, separated, and widowed women.

TABLE 5.  
Correlation of the PCL-R with direct scores and percentiles, according to the Instruction

Table 5. Correlation of the PCL-R with direct scores and percentiles, according to the Instruction

|                         |              | <i>Instruction</i> |                    |
|-------------------------|--------------|--------------------|--------------------|
|                         |              | Primary            | Secondary Tertiary |
|                         |              | PCL-R              |                    |
| Neuroticism             | r de Pearson | <b>0.252*</b>      | 0.171              |
|                         | p            | 0.018              | 0.383              |
| Neuroticism Percentile  | r de Pearson | <b>0.239*</b>      | 0.217              |
|                         | p            | 0.025              | 0.267              |
| Extraversion            | r de Pearson | -0.032             | -0.091             |
|                         | p            | 0.766              | 0.645              |
| Percentile Extraversion | r de Pearson | -0.039             | -0.085             |
|                         | p            | 0.718              | 0.667              |
| Psychoticism            | r de Pearson | <b>0.393**</b>     | <b>0.433*</b>      |
|                         | p            | 0.000              | 0.021              |
| Percentile Psychoticism | r de Pearson | <b>0.350**</b>     | <b>0.440*</b>      |
|                         | p            | 0.001              | 0.019              |
| Sincerity               | r de Pearson | 0.184              | 0.158              |
|                         | p            | 0.087              | 0.423              |
| Sincerity Percentile    | r de Pearson | 0.159              | 0.219              |
|                         | p            | 0.140              | 0.263              |
| Total                   |              | 88                 | 28                 |



There is a statistically significant and positive correlation between the two primary and secondary education levels between the PCL-R and Psychoticism. This result does not allow a clear relationship to be established between the level of studies and psychopathy.

TABLE 6  
PCL-R according to the offense committed.

|           | Illicit traffic of scheduled substances subject to control | Robbery | Murder | Swindle | Illegal adoption | Entry of prohibited items | Illicit association | Delinquency organizada | Illegal smuggling of migrants | Raped | Falsification documents | Attacked on modesty | Kidnapping | Peculation | Homicide | Injuries | Total |
|-----------|------------------------------------------------------------|---------|--------|---------|------------------|---------------------------|---------------------|------------------------|-------------------------------|-------|-------------------------|---------------------|------------|------------|----------|----------|-------|
| Very low  | 25                                                         | 1       | 6      | 3       | 1                | 3                         | 4                   | 0                      | 1                             | 1     | 0                       | 0                   | 2          | 0          | 0        | 0        | 47    |
| Low       | 8                                                          | 3       | 3      | 3       | 0                | 0                         | 4                   | 1                      | 1                             | 0     | 0                       | 0                   | 0          | 1          | 0        | 0        | 24    |
| Moderated | 11                                                         | 6       | 5      | 0       | 0                | 2                         | 3                   | 0                      | 0                             | 0     | 1                       | 1                   | 0          | 0          | 1        | 1        | 31    |
| High      | 3                                                          | 2       | 2      | 0       | 0                | 0                         | 0                   | 1                      | 0                             | 0     | 0                       | 0                   | 0          | 0          | 0        | 0        | 8     |
| Very high | 1                                                          | 0       | 1      | 0       | 0                | 0                         | 0                   | 0                      | 0                             | 0     | 0                       | 0                   | 0          | 0          | 0        | 0        | 2     |
| Total     | 48                                                         | 12      | 17     | 6       | 1                | 5                         | 11                  | 2                      | 2                             | 1     | 1                       | 1                   | 2          | 1          | 1        | 1        | 112   |

The accumulation of cases of moderate psychopathy is associated with the subjects who commit theft, illicit drug trafficking, and murder, while, for a very low, the accumulation of cases is found in illicit drug trafficking.

## DISCUSSION

The study found different results that can be contrasted with investigations carried out, where it has been possible to determine that the PCL-R is one of the most used and effective instruments to measure psychopathy, from its validity to its reliability<sup>29,30</sup>.

The literature allows us to conclude a correlation between psychoticism, which is one of the dimensions described by Eysenck and Eysenck<sup>28</sup>, and primary psychopathy, while extraversion and neuroticism are associated with secondary psychopathy. This is consistent with what was reported in our study<sup>31</sup>. When we speak of psychoticism, we must bear in mind that beyond being a diagnostic criterion for psychopathy, it is usually described as a psychometric measure of predisposition or tendency to psychopathy<sup>32</sup>.

On the other hand, it is essential to underline that the EPQ-A factors are not orthogonal; that is, they are related to each other, although we know that it is impossible to obtain isolated and independent factors in their entirety. Consequently, our sample presents with psychoticism and neuroticism as mentioned above, and, indeed, they show a correlation with levels of psychopathy in the PCL-R categorical score. It was also recorded that the women who show a high Sincerity score could be expected to present high social desirability. However, in our sample, it is found that the high scores in Sincerity are equal to those reported for neuroticism, which, according to Eysenck and Eysenck<sup>28</sup>, means that a person who tries to give a socially desirable image tends to have low scores in neuroticism. This is not the same as our study, since a person who tries to give a sociable image, in general, shows marked neuroticism traits, which is why an inverse relationship should be found between psychoticism and psychopathy. This is not evidenced in the present investigation.

After reviewing varied literature, it was found that psychopathy is considered an ambiguous construct since for Fernández and Echeburúa<sup>33</sup>, personality disorders do not have an association with psychopathic behaviors, but it was evidenced that the formation of psychopathic personality has to do directly with the traits of psychoticism described from the trait theory..

In prisons, female psychopathy has not been studied in-depth, and most of it is unknown, presenting multiple unknowns about this construct, as Hare himself says. and, indeed, something similar happens with our research. On the other hand, it was found that the age range from 48 to 63 years is highly related to the factors of psychopathy and neuroticism that would probably be associated with aging and may be related to hormonal (menopause) and also social aspects due to the completion of the active working life, which

produces maladjustment in the subjects of the sample. Likewise, the range from 27 to 47 years indicates that the correlations found to indicate a sub-clinical silence of the pathology or a period of normality of the psychopathy. Finally, for the range of 18 to 27 years, it is indicated that there is an association between psychopathy and psychoticism, which could indicate the presence of primary psychopathy in the younger population, being consistent with the literature<sup>25</sup>.

Another relevant aspect is the association between psychopathy and marital status, which leads us to think that being accompanied or having a partner is a protective factor for psychopathy.

Likewise, it was reported that psychopathy is not associated with murder, and consequently, cases of low and very low psychopathy are related to cases that commit murder. Regarding the accumulation of cases of moderate psychopathy, there is an association with the subjects who commit theft. It should be noted that part of the study's limitations was the difficulty in accessing the files and expanding the type of robbery or detecting whether it was associated with organized mafias, drug trafficking, and assassins. Another limitation was the sample size<sup>32</sup>.

Psychopathy, as mentioned by Peñañiel<sup>34</sup>, is a construct found in 1% to 3% of the population. However, it is estimated that with the female population, the statistic would be lower, as we described in our research, where it was shown that less than 2% of the population exhibits psychopathic behaviors.

In similar instances, it is shown that psychopathy is a pathology that is more closely related to substance use, which, according to González and Rey<sup>35</sup>, can be related to the search for sensations that are the same as those sought by the psychopath when faced with different stimuli. Drug use or antisocial behavior is related to paranoia, inability to accept responsibilities, affective instability, superficial affection, and lack of remorse, characteristics described by Hare himself.

To this can be added, as Espada et al.<sup>36</sup> stated that people's scarce social skills and an inordinate sense of personal worth led them to become involved in criminal activities and substance use. As with the personality constructs, many of these indicate the degree to which a particular subject, which approaches the "psychopathic prototype," manifests specific criteria that affect himself and society. According to the literature and our studies, the lack of empathy allows subjects to be classified as psychopaths, and, without a doubt, it is a challenge for psychotherapy<sup>37</sup>. Finally, in a study carried out in Sao Paulo with a sample of 195 offenders, it was determined that the PCL-R and the personality traits associated with Psychoticism show a statistically significant association, as shown in our study<sup>38-41</sup>.

On the other hand, it would be interesting to carry out empirical studies related to COVID-19 in the face of the health emergency due to the COVID-19 pandemic, both in the confinement, distancing and vaccination stage in different populations<sup>42,43</sup> related to emotional<sup>44</sup> and educational<sup>45,46,47,48</sup> aspects.

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