Violence is inherent to life in society and can take various forms that show its complexity when viewed closely; in this sense, gender violence represents one of the faces of violence as a social issue (Boira & Marcuellos, 2014). The relevance of this casuistry is such that many authors label it as one of the greatest social and public health problems, both due to its magnitude and the severity of its consequences (Cáceres, 2011; Cuenca et al., 2015).

In line with this concern, some studies place the prevalence of this problem at around 30% of women (Ferrer-Pérez & Bosch-Fiol, 2016; Gracia & Lila, 2015; Organización Mundial de la Salud [World Health Organization] [OMS, 2013, 2016]) and the scientific community has echoed, as shown by the bibliometric analysis of research on gender violence by Arias et al. (2016), registering more than 16,000 related scientific publications. In this sense, the need to provide an adequate response becomes imperative and, although historically it has been directed fundamentally towards the victims, there are actions that focus on aggressors, such as intervention programs with abusers; these programs arise as a consequence of the social recognition of gender violence as a problem of first magnitude (Mackay et al., 2015).

The first programs emerged in the United States and Canada between 1970 and 1980; then they spread throughout Europe from the 80s, e.g., in 1984 in Germany, in 1986 in Norway, or in 1990 in Spain (Feder & Wilson, 2005; Ferrer-Pérez et al., 2016; Subirana & Pueyo, 2013). This tradition of intervention has grown to such an extent that previous meta-analyses, no definite conclusions can be drawn about the effectiveness of this type of program.

In this research, a meta-analytic study is proposed with the aim of determining the state of the art of the efficacy of treatment programs for gender aggressors across different variables. Doing so is relevant in view of the inconsistency in the results of previous meta-analyses and the proliferation of new intervention programs for gender aggressors. The results of general meta-analysis show a positive, though not significant, effect of the intervention. The analysis of moderating variables shows a positive, significant, and close-to-moderate effect size for interventions lasting fewer than 16 weeks/sessions ($\delta_w = .39$) and follow-up periods greater than or equal to 12 months ($\delta_w = .38$), and a positive, significant and moderate size for interventions using cognitive-behavioral therapy ($\delta_w = .57$). However, along the same lines, as previous meta-analyses, no definite conclusions can be drawn about the effectiveness of this type of program.
extent that today it is estimated that there are over 2,500 programs in
the United States and over 500 in Europe (Geldschläger et al., 2009)
and, in parallel, research tradition on their characteristics has also
suffered a considerable increase (Ginés et al., 2015).

Along these lines, two have been the most widely used models in
this area: the Duluth model and cognitive-behavioral therapy
(CBT). The Duluth model is a program that was developed by
Pence and Paymar (1983) in Duluth, Minnesota, that combines a feminist
perspective with a psychoeducational approach. The basis on which
it is based is that the cause of violence comes from patriarchal and
male chauvinist learning that occurs in society, which urges and
naturalizes the use of violence, giving rise to an asymmetry of power
based on gender. Therefore, the efforts of this program are aimed
at identifying people’s behaviors to exercise power and control,
promoting behavioral and attitudinal changes; for this it uses
two tools, the Power and Control Wheel (negative behaviors and
attitudes) and the Equality Wheel (positive vision of roles within
relationships), which act as facilitators of the identification of causes
of gender violence.

For its part, the CBT model was developed by Sonkin et al. (1985)
and, although there are variations of it, they are collected under the
same nomenclature. The common denominator of these programs is
that their objective is focused on the modification of maladaptive
behaviors that precede violence. Violence remains functional for the
subject, since it acts by reducing bodily tension, achieving obedience
from the victim or temporarily ending an uncomfortable situation
(Sonkin et al., 1985). Since this is a learned behavior, alternative
non-violent behaviors can be inserted in its place, mainly through
techniques such as training in social skills or anger management
techniques (Babcock et al., 2004).

On the other hand, meta-analyses have created a category of
Other Types of Intervention (OTI) for all those programs
that do not correspond to previous categories. Under this label,
highly heterogeneous programs are collected, from mixtures of
different interventions (for example, Duluth model and CBT), to
psychoeducation programs, anger control programs or
mind body bridging (Arias et al., 2013). However, treatment labels
are sometimes misleading, and membership in one category or another
is increasingly diffuse since, for example, some CBTs implement
the theme of values, or some programs that use the Duluth model
are based on gender. Therefore, the efforts of this program are aimed
at identifying people’s behaviors to exercise power and control,
promoting behavioral and attitudinal changes; for this it uses	
methods (Babcock et al., 2004).

Whatever the type of intervention, one of the aspects that has
received the most attention is the concern for their effectiveness. In
this sense, one of the main objectives of the programs is to reduce the
probability of recidivism, which is therefore one of the variables used
to measure the success of the interventions (Coulter & VandeWeerd,
2009). In this regard, there are a series of previous meta-analyses
whose results show limited efficacy (Arias et al., 2013; Babcock et al.,
2004; Feder & Wilson, 2005; Smedslund et al., 2011).

The meta-analysis carried out by Babcock et al. (2004) gathered
a total of 22 studies that evaluated the effectiveness of the programs
through different variables: (a) percentage of recidivism through
official records (OR) or partner reports (PR); (b) type of study
(experimental or quasi-experimental); (c) type of intervention
(Duluth, CBT or OTI); (d) duration of the intervention (short or long);
(e) follow-up period (greater or fewer than 12 months). Likewise,
they also recorded the rate of individuals who successfully completed
treatment but, due to the heterogeneity of criteria used across the
studies, it was decided not to include this variable in the analysis.
Their results show that there are no significant differences between
the Duluth model and CBT, and that the effects of intervention
programs on recidivism are small; in the best of cases, their results
suggest that treated abusers would have an improvement of one
third of a standard deviation compared to untreated ones in terms of
recidivism ($d = 0.34$).

For their part, Feder and Wilson (2005) focused on the type
of intervention, differentiating between (a) feminist-based
psychoeducational approaches, (b) CBT, and (c) studies that
combined both approaches. The results of their work were diverse
depending on the source of information on recidivism (OR or PR) or
the study design (experimental or quasi-experimental) but, in any
case, the conclusions they reached were that the results left doubts
on the effectiveness of this type of program. On the other hand,
Smedslund et al. (2011) reviewed programs that used CBT, including
six randomized experiments, but their conclusions were that the
evidence was insufficient to say anything about the effectiveness
of the intervention in reducing or eliminating violence.

Finally, the meta-analysis of Arias et al. (2013) collected a total of 22
articles, with which they computed 49 effect sizes and a cumulative
sample of 18,941 abusers. In terms of method, the criteria used were
very similar to the meta-analysis previously performed by Babcock
et al. (2004), and they came to the conclusion that in general treatment
has a positive, though not significant, effect and can sometimes even
have significant negative effects; along these lines, they affirm that
the evidence is not enough to reach robust conclusions.

The results of these meta-analytical studies reveal the limited
evidence that exists regarding the effectiveness of this type of
program and, therefore, highlight the challenge faced by professionals
and researchers in this field (Lila et al., 2020). An effort to overcome
these limitations is found in the study of moderating variables, such
as the duration of the intervention program or the follow-up period.
Regarding the first variable, given that gender violence is based on
what Maruna (2004) calls toxic cognitions, that is, dysfunctional
thoughts that are characterized by being internal, stable and global,
brief interventions are related to a lower effectiveness; along
these lines, long interventions facilitate the consolidation and
generalization of acquired skills (Arias et al., 2013). On the other hand,
the follow-up period has been related as one of the most relevant
moderators in recidivism, since it usually occurs in the first two years
and, in the case of gender-based violence, in the first six months
(Gondolf, 2002; Redondo et al., 2001). However, the inclusion of these
moderating variables in the studies has not been enough to reliably
explain the results, so researchers consider various hypotheses in this
regard, mainly related to possible methodological deficiencies or the
characteristics of the intervention program itself.

As for the shortcomings of a more methodological nature,
there is the scarcity of experimental designs and low reliability
of measurements. On the one hand, although quasi-experimental
designs can produce effect sizes comparable to experimental ones
(Heinsman & Shadish, 1996), the latter allow greater confidence in
conclusions in terms of causality relationships (Babcock et al., 2004);
however, random assignment of subjects to conditions of treatment
or no treatment implies both an ethical and a practical problem in this
field of intervention. On the other hand, the measure about recidivism
is usually carried out through OR, PR, or even self-reports of the abuser
himself, but reliability of these measures as an index of recidivism
has been questioned (Novo et al., 2012). Along these lines, the meta-
analysis by Babcock et al. (2004) shows very different recidivism rates,
being 21% according to ORs and 35% according to PRs.

Furthermore, there are the aspects more related to the intervention
program itself, such as high dropout rates, lack of motivation and
adherence to the treatment or lack of adaptation to aggressors’
personal characteristics. The high dropout rate has been considered
as one of the main reasons for the lack of evidence on effectiveness
(Babcock et al., 2004; Crane et al., 2015), with a range that oscillates
between 15% and 60%. This high rate may be conditioned to the lack
of motivation and adherence of the subject, which can be partly
explained by the component of mandatory by judicial order that
usually accompanies this type of measures (Ferrer-Pérez & Bosch-
Fiol, 2016), or the lack of adaptation to an individual’s idiosyncratic
characteristics.
In this regard, some authors attribute the low efficacy of interventions to the poor adaptation that exists regarding particular needs of individuals (Cavanaugh & Gelles, 2005; Huss & Ralston, 2008). As a consequence, a line of research has been derived regarding types of aggressors to test whether there really are differences. In this sense, the typology that has received the most attention is that of Holtzworth-Munroe & Stuart (1994), which, based on three dimensions (extent of violence, severity of violence, and psychopathological aspects of an abuser) generates three groups of aggressors (violent only in the family, borderline/disogenic, and violent in general/antisocial), to which is added a fourth (low intensity antisocial) as a result of empirical validation carried out in a community context (Holtzworth-Munroe et al., 2000).

Either way, the issue of interventions with gender abusers has given rise to an in depth discussion on their efficacy, as a consequence of which the present meta-analytic review has been proposed.

Objectives

The main objective in this study is to perform a meta-analysis to learn the state-of-the-art of the efficacy of gender abusers' treatment programs through different variables, given the inconsistence in the results of previous meta-analyses and the proliferation of new intervention programs for gender abusers. For it, this study seeks to replicate previous meta-analytical studies on the effectiveness of intervention programs with gender abusers (Arias et al., 2013; Babcock et al., 2004; Feder & Wilson, 2005; Smesuland et al., 2011), as well as increasing knowledge about it by incorporating new studies. As moderating variables, follow-up period, type of intervention, and duration of the intervention are considered. In this way, we will proceed to check whether doubts persist about the limited efficacy of the interventions or whether, on the contrary, they are effective in reducing recidivism. Lastly, it is expected that this information may prove relevant in the fields of risk assessment and interventions with abusers in general, and specifically, for the technical teams employed in prisons.

Method

Study Search

In order to achieve the objectives proposed in this meta-analytical review, the recommendations of PRISMA statement (Urrúa & Bonfill, 2010) were followed, as well as other relevant articles (Perestelo-Pérez, 2013; see also Fernández-Ríos & Buela-Casal, 2009; Sánchez-Meca, 2010). Along these lines, 4 different strategies were carried out to locate the studies:

a) Search in electronic databases of international reference (PsycInfo, Scopus, Web of Science).

b) Review of previous meta-analyses on the subject.

c) Checking the references of selected publications (“ancestry approach”).

d) Contact with relevant researchers on the subject under review.

Regarding the selection of keywords, those used in previous meta-analyses were taken as a starting point. In addition, the bibliometric analysis of research on gender violence by Arias et al. (2016), as well as thesaurus of PsycInfo and DeCS (Descripciones en Ciencias de la Salud), in order to design a search equation as comprehensive as possible, were used.

As a result of this revision, the Boolean search equation was configured, resulting from the combination of the following keywords: “intimate partner violence”, “domestic violence”, “family violence”, “violencia de género”, “violencia doméstica”, “violencia familiar”, “batterer”, “aggressor”, “maltratador”, “agresor”, “program”, “intervention”, “treatment”, “intervención”, “tratamiento”, “assessment”, “evaluation”, “recidivism”, “effectiveness”, “evaluación”, “reincidencia”, “efectividad”.

It should be noted that we have chosen to use only articles published in double blind peer-reviewed journals. This criterion acts objectively as a filter to ensure that only high-quality research is published by determining the validity, methodology, and contribution of the study. On the other hand, no temporal or idiomatic criteria have been used to narrow the search in order to obtain as many results as possible. Likewise, researchers focused on the topic were contacted to prevent possible publication bias.

This strategy reported a total of 752 results (247 results in PsycInfo, 247 in Scopus, and 261 in WOS); after removing duplicate articles using the Endnote bibliographic manager, a total of 482 articles were obtained; 11 additional articles were identified from previous meta-analyses. Subsequently, the remaining results were analyzed, from which a total of 26 articles were selected to form part of this meta-analysis, of which 39 effect sizes could be computed, with a total sample of 19,773 abusers.

Inclusion and Exclusion Criteria

A total of 5 criteria were used for inclusion of studies:

a) Samples made up of gender abusers.

b) Adult population samples, that is, those over 18 years old.

c) Provide information on the sample size, both the initial and corresponding to subjects who had successfully completed the treatment.

d) Provide information on characteristics of the intervention program, that is, (a) follow-up time, (b) type of intervention, and (c) duration of intervention.

e) Provide information on recidivism rate through RO, for example, judicial, police, or prison records.

On the other hand, all publications were excluded that (a) were not primary studies, (b) had a sample size less than 30, (c) had a follow-up period of fewer than 6 months, (d) did not report the recidivism rate relative only to crimes related to gender violence, and (e) did not provide sufficient data to be able to calculate effect size.

Coding

Once the article selection process was completed, the results were encoded based on (a) article reference, (b) sample size of subjects who successfully completed the intervention, (c) characteristics of the intervention program (type of intervention, duration, and follow-up period), (d) recidivism rate (%), and (e) effect size (δ). Encoding was carried out by an encoder who noted the levels of each of the categories created and described for each variable by researchers and marked exactly where these qualitative variables were referred to in the text. A second encoder reviewed all of the studies using the same encoding system. Thereafter, both registered categories for each variable and degree of agreement in encodings were checked with Cohen's kappa (k). After coding primary studies, Cohen's kappa was .80, with values between .72 and .89. Then, discrepancies were discussed among researchers using a third judge in those cases where it was not possible to reach an agreement. Finally, a full inter-judge agreement was obtained (k = 1). Figure 1 shows flow diagram of the study selection process.

All the studies that met inclusion criteria were divided into quasi-experimental (k = 22) and experimental (k = 4), whose characteristics can be observed in Table 1a and 1b, respectively. Experimental studies are those that randomly assign subjects to “treatment” or “no treatment” conditions; quasi-experimental studies, on the other hand, either do not use a control group or, if they do, it is not equivalent to the experimental group, for example, when comparing
subjects under treatment conditions with subjects who drop out of the program. In the case of quasi-experimental studies, given that they do not have a control group to determine recidivism rate, a test value of 0.21 has been used as a base rate in terms of RO (Arias et al., 2013; Babcock et al., 2004; O'Leary et al., 1989; Rosenfeld, 1992).

In order to study moderating variables, those that have been outlined as relevant in previous meta-analyses have been selected. In addition, same criteria have been followed when coding, since in this way conclusions reached in this work can be easily compared with conclusions already obtained by previous studies.

First, the follow-up period was dichotomized according to whether programs had a follow-up period of fewer than 12 months (k = 7) or equal to or greater than 12 months (k = 32). On the other hand, types of intervention were coded according to whether they used the Duluth model (k = 14), CBT (k = 10), or OTI (k = 15). Lastly, the duration of the intervention was coded according to whether the programs lasted fewer than 16 weeks/sessions (k = 10) or equal to or greater than 16 weeks/sessions (k = 29).

Finally, it is necessary to mention that previous meta-analyses used the source of information on recidivism as a moderating variable, which could be collected through ORs, PRs, or self-reports.
of the abuser. Although an abuser’s self-reports have hardly been used due to their evident bias, PRs have been systematically coded; in this sense, given that the search for studies only reported a new study that used PRs, it was decided to reject it for the present study.

Data Analysis

The procedure used to carry out the present meta-analysis was the effect sizes of experiments and a set of workbooks designed by Suurmond et al. (2017), as well as a calculator of the probabilities of normal distribution and its inverses were used as tools for calculation purposes. To carry out the analysis, the rate of recidivism (dichotomous variable) was taken as an indicator of the effectiveness of the programs; this variable is generally expressed through proportions (percentages) and, therefore, the difference in proportions was used to calculate effect size. This difference implies a prior non-linear transformation of proportions, since the simple difference in proportions is not an adequate estimate of effect size (Arias et al., 2013). For this purpose, Hedges and Olkin’s (1985) \( \delta \) was used, a statistic derived from Kraemer and Andrews’ (1982) procedure.

Kraemer and Andrews’ (1982) procedure consists of a non-parametric approach for estimating the effect size through pre-posttest scores of experimental and control groups. However, if pretest scores are not available, there are derived statistics that allow effect size to be calculated from posttest scores, such as Hedges and Olkin’s (1985) \( \delta \). Through this statistic, an estimate of pre-posttest effect size is obtained through the difference of the inverse function of the probability of the experimental group minus the probability of the control group, \( \delta = \Phi^{-1}(\tilde{p}_e) - \Phi^{-1}(\tilde{p}_c) \). To complete the description of this formula, an example of effect size estimation is presented with the statistics obtained from the article by Haggard et al. (2015). Since the recidivism rate of the experimental group is 15%, the complementary outcome of this rate (1 - .15 = .85) was considered using the calculator of inverse function of the probability for the estimation of \( \Phi^{-1}(\tilde{p}_e) = 1.0364 \). For the estimation of \( \Phi^{-1}(\tilde{p}_c) \) in the case of quasi-experimental studies, since they do not have a control group to determine recidivism rate, 0.21 was used as the test value, since it has been consistently reported in the literature as the prime rate (Arias et al., 2013; Babcock et al., 2004; O’Leary et al., 1989; Rosenfeld, 1992). Given the complementary outcome of this test value is 0.79, the estimate of \( \Phi^{-1}(\tilde{p}_c) = .8064 \). Therefore, \( \delta = \Phi^{-1}(\tilde{p}_e) - \Phi^{-1}(\tilde{p}_c) = .23 \). Then, an effect size of 0.20, 0.50, 0.80 is considered to be small, medium, and large, respectively.

Once all the effect sizes of experiments were computed, we calculated (a) average effect size weighted by sample size (\( \bar{\delta}_w \)); (b) weighted average observed variance (\( S_{\delta_w}^2 \)); (c) observed standard deviation (\( SD_{\delta_w} \)); (d) sampling error variance (\( S_{\delta}^2 \)); (e) residual variance (\( S_{RES}^2 \)); (f) percentage of observed variance explained by sampling error (% VE); and (g) confidence interval (90% CI). Assuming that said interval contains 0, it would imply the existence of heterogeneity (not significant effect) and, in this case, moderator variables should be studied. Likewise, heterogeneity was also evaluated using Q and I² statistics. Heterogeneity can be quantified as low, moderate, and high, with upper limits of 25%, 50%, and 75% for I², respectively. The results of the meta-analysis are presented below.

Results

Before carrying out the meta-analysis, a study of outliers was carried out, with the aim of avoiding contamination of results. For this purpose, ± 1.5 * IQR (inter-quartile range) of the average effect size weighted by sample size (\( \bar{\delta}_w \)) was used as decision criterion. The results obtained did not yield any anomalous value, so the meta-analytical procedure was continued.

The present study consists of a total of 4 meta-analyses, the first of which corresponds to general meta-analysis (Table 2), and the subsequent ones to the analysis of the three previously coded
moderating variables: (a) follow-up period (Table 3); (b) type of intervention (Table 4); and (c) duration of intervention (Table 5).

### Table 2. Results of the General Meta-analysis

<table>
<thead>
<tr>
<th>k</th>
<th>N</th>
<th>(\delta_w)</th>
<th>(S^2_{\omega})</th>
<th>(SD^2_{\omega})</th>
<th>(S^2)</th>
<th>(SD^2)</th>
<th>(%) EV</th>
<th>90% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>1773</td>
<td>0.54</td>
<td>0.049</td>
<td>0.22</td>
<td>0.008</td>
<td>0.041</td>
<td>16.32</td>
<td>[-18, .90]</td>
</tr>
</tbody>
</table>

Note. \(k = \) number of studies; \(N = \) cumulative sample size; \(\delta_w = \) average effect size weighted by sample size; \(S^2_{\omega} = \) observed variance of \(\delta_w\); \(SD^2_{\omega} = \) observed standard deviation of \(\delta_w\); \(S^2 = \) variance of the sampling error of \(\delta_w\); \(SD^2 = \) residual variance; \% EV = percentage of \(S^2\) explained by sampling error; 90% CI = confidence interval for \(\delta_w\).

Results for general meta-analysis illustrated in Table 2 contain the data of the 39 effect sizes that have been computed, with a cumulative sample of 19,773 subjects. When analyzing the data, a level of heterogeneity was observed to be elevated, \(Q(38) = 238.59, p < .001\), which suggested the presence of moderating variables (\(F = .85\)). This indicated the need to use an effects analysis model random. The use of this model showed a size of the average effect weighted by the sample size of .54, therefore positive, with an observed variance of 0.049, of which 16.32% is explained by sampling error. However, the effect found is not significant since the confidence interval contains the value 0 (90% confidence interval CI [-18, .90]); in this way, we proceed to search for moderator variables.

For the search for moderating variables, the sequence of analysis carried out by previous meta-analyses was respected, since it is covered by theoretical criteria (Rosenthal, 1995). In this sense, the scientific literature has indicated the duration of the follow-up period, as one of the most relevant moderators in recidivism (Gondolf, 2002; Redondo et al., 2001), which is why it has been the first moderating variable to be analyzed. Along these lines, results shown in Table 3 reflect that most of the studies take into account the importance of this criterion, including long follow-up periods (\(k = 32\)), while fewer studies use a period less than 12 months (\(k = 7\)). The average effect size weighted by the sample size is greater when the follow-up period exceeds one year (\(\delta_w = 0.55\)), but, nevertheless, the results are only significant for the follow-up period of fewer than 12 months (90% confidence interval CI [14.90], showing an effect size close to moderate (\(\delta_w = 0.38\)). The observed variance is greater in the group of fewer than 12 months (\(S^2_{\omega} = 0.104\)) compared to that of more than 12 (\(S^2_{\omega} = 0.045\)), being explained by 25.96% and 15.55% by the sampling error, respectively.

The type of intervention implemented by the programs has also emerged as a relevant moderator variable. In this sense, in Table 4 it can be observed that the type of Duluth treatment (\(k = 14\)) has a positive, but not significant average effect (\(\delta_w = 0.51, 90\% \text{ CI} [-.23, .79]\)), the CBT (\(k = 10\)) has a positive average effect, significant and moderate (\(\delta_w = 0.57, 90\% \text{ CI} [0.04, 1.18]\), and the interventions grouped under OTI (\(k = 15\)) show a positive average effect, but not significant (\(\delta_w = 0.59, 90\% \text{ CI} [-.18, 1]\)). On the other hand, although OTIs are the type of program that gathers the most studies, they group a great heterogeneity of studies, so that the Duluth model and CBT remain the most widely implemented types of interventions.

Finally, Table 5 shows the results of the meta-analysis carried out with the moderating variable of the duration of the intervention. In this regard, it is interesting to mention that most of the interventions use long interventions according to the coding that has been carried out (\(k = 29\)), with a duration of 16 weeks or sessions onwards, while fewer interventions with a duration below this (\(k = 10\)). Regarding results, average effect size weighted by sample size is positive, but not significant, in the case of interventions that exceed 16 weeks/sessions (\(\delta_w = 0.57, 90\% \text{ CI} [-.26, .88]\)), while it is positive, significant, and close to moderate in the case of interventions that do not exceed that duration (\(\delta_w = 0.39, 90\% \text{ CI} [.09, .87]\)). The variance is 0.084 for shorter interventions, part of which is due to sampling error (\(S^2 = 0.015\)), while it is 0.039 for longer interventions, part of which is also due to sampling error (\(S^2 = 0.007\)).

### Discussion

The results obtained in this meta-analysis show that, in general, intervention on gender abusers has a positive, but not significant effect. In this sense, conclusions follow the historical thread of those already reached by previous meta-analytic studies (Arias et al., 2013; Babcock et al., 2004; Feder & Wilson, 2005; Smidslund et al., 2011). However, it is necessary to specify that the results presented refer

### Table 3. Results of the Meta-analysis of the Follow-up Period

<table>
<thead>
<tr>
<th>Period</th>
<th>k</th>
<th>N</th>
<th>(\delta_w)</th>
<th>(S^2_{\omega})</th>
<th>(SD^2_{\omega})</th>
<th>(S^2)</th>
<th>(SD^2)</th>
<th>% EV</th>
<th>90% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 12 months</td>
<td>7</td>
<td>1079</td>
<td>0.38</td>
<td>0.104</td>
<td>0.32</td>
<td>0.027</td>
<td>0.077</td>
<td>25.96</td>
<td>[14.90]</td>
</tr>
<tr>
<td>≥ 12 months</td>
<td>32</td>
<td>18694</td>
<td>0.55</td>
<td>0.045</td>
<td>0.21</td>
<td>0.007</td>
<td>0.038</td>
<td>15.55</td>
<td>[-21, .89]</td>
</tr>
</tbody>
</table>

Note. \(k = \) number of studies; \(N = \) cumulative sample size; \(\delta_w = \) average effect size weighted by sample size; \(S^2_{\omega} = \) observed variance of \(\delta_w\); \(SD^2_{\omega} = \) observed standard deviation of \(\delta_w\); \(S^2 = \) variance of the sampling error of \(\delta_w\); \(SD^2 = \) residual variance; \% EV = percentage of \(S^2\) explained by sampling error; 90% CI = confidence interval for \(\delta_w\).

### Table 4. Results of the Meta-analysis of the Type of Intervention

<table>
<thead>
<tr>
<th>Type</th>
<th>k</th>
<th>N</th>
<th>(\delta_w)</th>
<th>(S^2_{\omega})</th>
<th>(SD^2_{\omega})</th>
<th>(S^2)</th>
<th>(SD^2)</th>
<th>% EV</th>
<th>90% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duluth</td>
<td>14</td>
<td>12705</td>
<td>0.51</td>
<td>0.029</td>
<td>0.17</td>
<td>0.005</td>
<td>0.024</td>
<td>17.24</td>
<td>[-23, .79]</td>
</tr>
<tr>
<td>CBT</td>
<td>10</td>
<td>1713</td>
<td>0.57</td>
<td>0.139</td>
<td>0.37</td>
<td>0.025</td>
<td>0.114</td>
<td>17.99</td>
<td>[0.4, 1.18]</td>
</tr>
<tr>
<td>OTI</td>
<td>15</td>
<td>5355</td>
<td>0.59</td>
<td>0.064</td>
<td>0.25</td>
<td>0.012</td>
<td>0.052</td>
<td>18.75</td>
<td>[-18.1]</td>
</tr>
</tbody>
</table>

Note. \(k = \) number of studies; \(N = \) cumulative sample size; \(\delta_w = \) average effect size weighted by sample size; \(S^2_{\omega} = \) observed variance of \(\delta_w\); \(SD^2_{\omega} = \) observed standard deviation of \(\delta_w\); \(S^2 = \) variance of the sampling error of \(\delta_w\); \(SD^2 = \) residual variance; \% EV = percentage of \(S^2\) explained by sampling error; 90% CI = confidence interval for \(\delta_w\).

### Table 5. Results of the Meta-analysis of the Duration of the Intervention

<table>
<thead>
<tr>
<th>Duration</th>
<th>k</th>
<th>N</th>
<th>(\delta_w)</th>
<th>(S^2_{\omega})</th>
<th>(SD^2_{\omega})</th>
<th>(S^2)</th>
<th>(SD^2)</th>
<th>% EV</th>
<th>90% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 16 weeks/sessions</td>
<td>29</td>
<td>17045</td>
<td>0.57</td>
<td>0.039</td>
<td>0.19</td>
<td>0.007</td>
<td>0.032</td>
<td>17.95</td>
<td>[-26, .88]</td>
</tr>
</tbody>
</table>

Note. \(k = \) number of studies; \(N = \) cumulative sample size; \(\delta_w = \) average effect size weighted by sample size; \(S^2_{\omega} = \) observed variance of \(\delta_w\); \(SD^2_{\omega} = \) observed standard deviation of \(\delta_w\); \(S^2 = \) variance of the sampling error of \(\delta_w\); \(SD^2 = \) residual variance; \% EV = percentage of \(S^2\) explained by sampling error; 90% CI = confidence interval for \(\delta_w\).
only to ORs, since in the search for studies only one additional study
could be identified that reported recidivism through PRs.
Regarding the moderating variable of the follow-up period, the
results were significant only for studies that used a period shorter
than 12 months, showing an effect size in the reduction of recidivism
close to moderate. In this sense, there is a certain correspondence with
the scientific literature since, given that in gender violence recidivism
tends to occur in the first six months (Gondolf, 2002; Redondo et al.,
2001) and intervention with this group affects its reduction in
this period; however, non-significant results for the period of more
than 12 months do not allow us to extend this conclusion into the
follow-up period. These results partially correspond to results found
by Babcock et al. (2004), since in their study they found positive,
significant, and small effect sizes for both follow-up periods.
For its part, the moderator of type of intervention turned out to
be only significant for CBT, being positive and moderate size, unlike
in previous meta-analyses such as Arias et al.’s (2013) or Babcock et al.’s
(2004), who found significant results only for OTIs. A possible
explanation for the effectiveness of CBT on reducing recidivism
could be that the intervention focuses on behavioral aspects and the
measure used (recidivism rate) records precisely these aspects; in
this sense, the Duluth model has a greater emphasis on attitudinal
and value-related aspects (Pence & Paymar, 1983).
Lastly, the duration of the intervention variable was not significant
for long interventions (≥ 16 weeks/sessions), unlike previous meta-
analyses, but it was significant for short interventions (< 16 weeks/
sessions), being positive and close to moderate in size. These a
priori results do not obey a logic and go in the opposite direction
to findings of scientific literature, which establish that longer
interventions are more effective because they affect toxic cognitions,
which are characterized by their internality, stability, and globality
(Maruna, 2004). However, as Boal and Mankowski (2014) state, the
relationship between the duration of the intervention programs and
the effectiveness in terms of recidivism is still not entirely clear.
In sum, the results of the present meta-analysis do not allow us
to establish definitive conclusions about the effectiveness of the
intervention with gender abusers. Following the conclusions reached
by previous meta-analytical studies, results are not sufficient but, at
the same time, the ineffectiveness of treatments cannot be deduced
from them. In any case, the evidence collected in this paper should
stimulate scientific interest in the analysis of other moderating
variables that may influence recurrence of gender-based violence,
as well as other characteristics of possible implementation in
intervention programs that may become an improvement in its
effectiveness. In this regard, there is a rich and diversified line of research
that ranges from aspects such as the consideration of particular needs of
individuals (Cavanaugh & Gelles, 2005; Huss & Ralston, 2008) to
aspects such as the problem of the high drop-out rate present among
programs (Crane et al., 2015; Ferrer-Pérez & Bosch-Fiol, 2016).

Study Limitations
The results obtained in the present meta-analysis should be interpreted in light of the present limitations. On the one hand, the
relative reliability of the measure used as an indicator of recidivism
(OR) can be highlighted, since a significant rate of it may not be
contained in these registries, which is known as hidden victimization
or black crime. Furthermore, it has not been possible to consider PR,
which, as has been highlighted in the scientific literature, show very
different recidivism rates compared to OR.
On the other hand, it is worth noting both the heterogeneity of
coded studies and the way in which they present the information,
given that on many occasions key results were reported unclearly.
Likewise, the scarcity of experimental designs as opposed to the
number of quasi-experimental designs may affect the results
obtained, since for the latter a base rate consistently reported in the
scientific literature has been used as the test value, but has not been
properly contracted with an equivalent control group.
Finally, other moderating variables that could play an important
role in explaining recidivism in gender violence have not been
considered, such as a high drop-out rate, lack of motivation and
adherence to treatment, or non-consideration of characteristics or
personal needs of subjects. In this sense, it would be interesting for
the new studies to focus on deepening these aspects, with the aim
of ending the debate on the effectiveness of this type of programs
and thus being able to face one of the greatest social problems of
our time, gender violence.

Conclusions
The results of this meta-analytical review have significant
implications in the criminological field. There is a literature corpus
on the effectiveness of interventions, which shows significant
effects on reduction of recidivism in official records compared
to other measures for reduction of recidivism, such as protection
orders (Herrera & Amor, 2017). However, in order to improve the
effectiveness of these programs, other individual variables based
on the risk-need-responsivity (RNR) model of Andrews et al. (2011)
could also be considered for their evaluation. For example, taking
into account the typology of batterers and the possible mental
disorders they present can play an important role in intervention
programs (Aguilar-Ruiz, 2018). It is also recommended that other
relevant factors in gender violence be evaluated as a criterion for the
analysis of the effectiveness of these programs, such as the cognitive
competence involved in their re-education or the acquisition of skills
and competences that reduce toxic cognitions and dysfunctional
thoughts characteristic of sexual offenders (Arnoso et al., 2017).

Conflict of Interest
The authors of this article declare no conflict of interest.

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References marked with an asterisk indicate studies included in the
meta-analysis.
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