




Dropout among perpetrators of intimate partner violence attending an intervention program

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ABSTRACT

Batterer intervention programs (BIPs) are some of the most relevant strategies to reduce intimate partner violence (IPV). However, the rate of dropout is significantly high, which may impact the effectiveness of such strategies. Literature has identified several factors associated with BIPs' dropout; nonetheless findings remain inconsistent. Thus, the aims of this study were to analyse the differences between perpetrators who completed the program and those who dropped out, in terms of sociodemographic, violence-related and intrapersonal variables, as well as identify the predictors of dropout. Eighty-three IPV perpetrators completed a set of measures that assessed attitudes toward domestic violence, physical and psychological abuse of a partner, aggression, coping skills, and readiness to change. Variables related to past criminal history and sociodemographics were also collected. 42.2% of IPV perpetrators failed to complete the intervention program. The results revealed that age and previous convictions by other crimes than IPV discriminated perpetrators who completed the program from those who dropped out, such that, being young and having a previous conviction predicted dropout. These findings reveal a need to further analyse the impact of these factors so BIPs can be tailored to meet the specificities of IPV perpetrators and prevent treatment dropout.

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Introduction

Intimate partner violence (IPV) is a major public health issue which occurs in all settings and among all socioeconomic and cultural groups (World Health Organization [WHO], 2012). IPV is frequently associated with physical, mental, and social consequences to the victims, their families, and the community (e.g. Bacchus et al., 2018; Vilariño et al., 2018). Although results from different studies and meta-analyses suggest that both men and women can perpetrate IPV (e.g. Archer, 2000; Straus, 2011), research has shown that men are the most common perpetrators and often perpetrate the most serious acts of physical violence against female partners (e.g. Archer, 2000; Straus, 2011; WHO, 2012).

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The scientific community, professionals, and public administrators have been looking for more effective strategies to prevent and reduce violence against women in intimacy. As a consequence, different social and legal measures have been developed. Intervention programs for perpetrators of IPV are one of these measures (e.g. Cannon et al., 2016; Cunha & Gonçalves, 2014; Ferrer-Perez & Bosch-Fiol, 2018; Gover et al., 2011; Scott et al., 2011). In many countries, the referral of individuals convicted for IPV for batterer intervention programs (BIPs) by the court works as an alternative measure to imprisonment (Dalton, 2007) or as an injunction (Cannon et al., 2016). These programs aim to promote behavioural, attitudinal and cognitive changes in perpetrators and to reduce IPV risk of re-victimisation/recidivism (e.g. Babcock et al., 2011; Coulter & VandeWeerd, 2009).

Despite the expansion of BIPs, its effectiveness in reducing future incidents of IPV remains controversial. Although several studies have revealed benefits for men who complete intervention programs, such as significant reduction in abusive behaviours (e.g. Catlett et al., 2010; Cunha & Gonçalves, 2015; Lila et al., 2020), risk of future violence (e.g. Coulter & VandeWeerd, 2009; Lauch et al., 2017), psychopathology (Cunha & Gonçalves, 2015), attitudes that tolerate IPV (e.g. Cunha & Gonçalves, 2015; Lila et al., 2020), and increase in self-esteem and problem-solving skills (Cunha & Gonçalves, 2015), the results of meta-analyses remain inconsistent. Some studies concluded that BIPs have reduced effects on IPV's cessation and recidivism rates (Arias et al., 2013; Babcock et al., 2004; Feder & Wilson, 2005); others point to a significant effect of BIPs in reducing violence (Karakurt et al., 2019); while others revealed an effective decrease on IPV recidivism when reported by the criminal justice system, but not when assessed by the survivor (Cheng et al., 2021). Despite these inconsistencies, the literature recognises the importance of continuing to integrate perpetrators into these programs, since this small effect may be significant for the victims (Babcock et al., 2004; Ferrer-Perez & Bosch-Fiol, 2018). Moreover, studies agree on the importance of improving BIPs in order to increase their effectiveness (e.g. Lila et al., 2018).

Research has consistently shown that one of the main problems of BIPs is the high rates of dropout (e.g. Cunha & Gonçalves, 2014; Jewell & Wormith, 2010), which justify the growing concern with this phenomenon, and raise serious questions regarding these intervention programs (Ferrer-Perez & Bosch-Fiol, 2018). The non-completion of programs designed to reduce recidivism is considered a significant obstacle for treatment success (e.g. McMurrin et al., 2010), resulting in potentially severe implications for client welfare and public safety (Olver et al., 2011): first, dropout is a predictor of IPV recurrence (e.g. Bennett et al., 2007; Carney et al., 2006; Gondolf, 2000; Lauch et al., 2017; Lila et al., 2019; Olver et al., 2011); second, many variables that predict treatment dropout also predict IPV recidivism (e.g. Cattaneo & Goodman, 2005; Hanson & Wallace-Capretta, 2004; Stith et al., 2004), as well as general recidivism (e.g. Eisenberg et al., 2019; Gendreau et al., 1996). Thus, it is crucial to understand perpetrators's characteristics associated with dropout to identify individuals who may be more likely to abandon treatment (e.g. Aske-land & Heir, 2013; Jewell & Wormith, 2010; Olver et al., 2011).

Several studies have been conducted to identify factors that predict IPV treatment dropout. Typically, studies focused on four broad categories of variables: (1) sociodemographic variables, such as age, education, and socioeconomic level; (2) violence-related variables, such as severity and frequency of violence, and criminal history (e.g. previous

arrests, source of referral); (3) intrapersonal characteristics, including personality and/or clinical disorders, substance use/abuse, relationship indicators (e.g. hostility, anger) and motivation; and (4) external factors, including intervention program, session fees, program length, distance travelled to participate in the program, and external monitoring (e.g. Daly & Pelowski, 2000; Jewell & Wormith, 2010; Olver et al., 2011). However, the findings that emerge from the different studies are mixed (see Daly & Pelowski, 2000 for a review).

Regarding sociodemographic variables, literature revealed that younger, unemployed, and single perpetrators, belonging to a racial/ethnic minority, less educated, and with a lower income tend to be more likely to dropout from intervention (e.g. Askeland & Heir, 2013; Blatch et al., 2020; Cantos et al., 2015; LaPosta et al., 2019; Timko et al., 2015). Opposingly, older, employed, married, Caucasian, more educated and with higher income perpetrators (e.g. Askeland & Heir, 2013; Bowen & Gilchrist, 2006; Catlett et al., 2010; Gover et al., 2011) demonstrate lower dropout rates. Concerning violence-related variables, different studies found that individuals who dropout tend to have more extensive criminal records (e.g. prior arrests and/or convictions; Bennett et al., 2007; Bowen & Gilchrist, 2006; Cantos et al., 2015; Richards et al., 2021). Nonetheless, other studies pointed that treatment completers have more prior arrests and/or convictions (Dalton, 2001; Daly et al., 2001). Research also revealed that court-mandated perpetrators are more likely to complete treatment than self-referred ones (Barber & Wright, 2010; Cannon & Ferreira, 2017; Lauch et al., 2017); however, findings are controversial on whether referral source predicts dropout (e.g. Dalton, 2001). Being victim of abuse and/or witnessing violence in the family of origin is also related to treatment dropout (Chang & Saunders, 2002), although other studies do not support these conclusions (Bowen & Gilchrist, 2006; Daly et al., 2001; Priester et al., 2019). The severity of abuse was also found as a predictor for treatment dropout, with men who inflict more severe violence against their intimate partner being at a greater risk to abandon treatment (Carney et al., 2006; Rooney & Hanson, 2001). Among intrapersonal characteristics, alcohol and drug use are correlated with treatment dropout (e.g. Bowen & Gilchrist, 2006; Cantos et al., 2015; Dalton, 2001; LaPosta et al., 2019; Lila et al., 2020; Romero-Martínez et al., 2019), and higher levels of anger with treatment completion (e.g. Bowen & Gilchrist, 2006; Chang & Saunders, 2002). Concerning motivation, results are mixed: while some studies reported that low motivation is related with dropout (e.g. Bennett et al., 2007; Pearson et al., 2020), others suggested that the stage of change was not related with intervention completion (e.g. Mach et al., 2020). Although only a few studies assessed the role of external factors on perpetrators' dropout (e.g. DeHart et al., 1999; Gondolf & Foster, 1991; Timko et al., 2015), it was found that men who paid higher fees were more likely to attend more sessions. Besides, participants who attended shorter programs were more likely to complete the intervention than participants who attended longer programs (Cissner & Puffett, 2006). Other studies found that the theoretical orientation of the treatment program was an important moderating variable of dropout, with Duluth/CBT programs revealing lower dropout rates (e.g. Jewell & Wormith, 2010; Zarling et al., 2019). Furthermore, a recent meta-analysis conducted by Santirso et al. (2020) revealed that IPV interventions that incorporated motivational strategies were significantly more effective in increasing the intervention dose and reducing dropout than interventions without motivational strategies.

Two meta-analyses were performed to clarify the former inconsistencies, providing a more comprehensive perspective on the ability of different factors to predict dropout (e.g. Jewell & Wormith, 2010; Olver et al., 2011). These meta-analyses concluded that several variables distinguish treatment completers from dropouts. The most significant factors were employment, age, income, education, professional status, marital status, race/ethnicity, referral source, previous IPV offences, criminal history, exposure to family violence in childhood, alcohol and drug use, personality and/or clinical disorders, anger, treatment engagement and motivation (e.g. Jewell & Wormith, 2010; Olver et al., 2011).

Batterer intervention programs (BIPs) in Portugal

In Portugal, the penal code prior to 1974 (the period when we were governed by a dictatorship) did not contemplate crimes against partners and/or ex-partners, and only in 1982 IPV was considered a crime for the first time. After that, different legal diplomas, and National Plans Against Domestic Violence introduced legislative, political, and social changes. In 1998 maltreatment became a semi-public crime, and in 2000 it became a public crime; in 2007, IPV was extended to same-sex relationships, and BIPs were considered as a possible additional penalty; in 2013, the crime was extended to dating relationships, and BIPs became mandatory (Cunha & Gonçalves, 2015). Besides, the III National Plan Against Domestic Violence 2007–2010 (Resolution of the Council of Ministers no. 83/2007) contemplated the implementation of prevention programs with perpetrators to avoid repeated offences for the first time.

In spite of social and legal advances and the high number of domestic crimes reported to the police in Portugal (in 2020, among our 10.3 million population, 23,439 crimes were reported to the police; Sistema de Segurança Interna [System of Internal Security], 2021), BIPs are very recent. The first interventions with batterers were implemented in the 1990s (e.g. Manita, 2008); but only in 2009, structured BIPs appeared. So far, there are only a few batterer's programs in the Portuguese context. The 'Contigo' Program (e.g. Marques et al., 2019; Rijo & Capinha, 2012), the Program for Aggressors of Domestic Violence (PAVD; Quintas et al., 2012; Rijo & Capinha, 2012) and the Promotion and Intervention Program with Batterers (PPRIAC; Cunha & Gonçalves, 2015) are three examples of BIPs, which revealed positive results in terms of efficacy, with completion rates between 71.4% (Quintas et al., 2012) and 77.5% ('Contigo' Program; Marques et al., 2019). In this study we will focus on the PPRIAC program.

The current study

This study aimed to examine the differences between individuals who completed the intervention program and those who dropped out, in terms of sociodemographic, violence-related and intrapersonal variables, using pre-treatment assessment scores in a sample of court- and self-referred men who attend a BIP – the PPRIAC. This study also intends to identify dropout predictors.

The PPRIAC was developed in 2010 at the University of Minho (Braga, Portugal). This program was intended for self- or court-referred adult heterosexual male perpetrators who wanted and/or were required to change their abusive behaviour against their

current or former intimate partner. Participants had to be able to read and write and should not present psychotic disorders, cognitive impairment, psychological and/or personality disorders, and/or substance abuse. The goals of the intervention were to end violence against the intimate partner and to promote batterer's personal and social skills (Cunha & Gonçalves, 2015). Specifically, the PPRIAC intended to: (a) stop the abusive behaviour and promote victim's safety; (b) get IPV perpetrators to accept responsibility for the abusive behaviour; (c) change irrational beliefs and attitudes toward marital violence; (d) promote respect for women and healthy relationships; (e) help the acquisition of personal and social skills; and (f) promote a violence-free approach in problem-solving. The program adopted a multilevel – comprising four to six individual sessions and 18 group sessions – and a multimodal approach, using Motivational Interview and cognitive-behavioural and psychoeducational techniques. The individual sessions, of 60 min each, were part of the screening, diagnosis, and motivational approach phase. The group sessions, of 90–120 min each, were part of the psychoeducational and behavioural control phase. The sessions occurred weekly and were facilitated by two therapists.

Although considerable research has been conducted to identify factors that predict BIPs dropout, most of the studies were conducted in North America; therefore their relevance to batterers treated in other contexts remains ambiguous. Moreover, in Portugal, to the best of our knowledge, there are no studies assessing variables related to treatment dropout. The identification of such variables is of great importance in the Portuguese context for two reasons: BIPs assessed revealed dropout rates between 23 and 29% (Cunha & Gonçalves, 2015; Marques et al., 2019; Quintas et al., 2012); and the identification of variables related to dropout can allow the development of more appropriate and effective intervention programs, and, thus, protect the victims and prevent future incidents of IPV (e.g. Cuevas & Bui, 2016; Daly & Pelowski, 2000; Gover et al., 2011).

The present study is also innovative since both court-ordered and self-referred batterers were included, when typical literature within this field has mainly focused on men under court order for treatment (Daly & Pelowski, 2000; Jewell & Wormith, 2010). By not focusing exclusively on court-ordered individuals, the potential effects of referral source can be analysed. Besides, in the present study intrapersonal variables that have not been frequently studied in male batterers, such as motivation, attitudes toward intimate partner violence, or coping skills (Daly & Pelowski, 2000; Wormith & Olver, 2002) were included in order to understand their impact on treatment dropout.

Method

Participants

Participants were recruited based on a process of convenience sampling. The present study included 83 heterosexual male IPV perpetrators who were enrolled in the PPRIAC. Participants were, in average, 46.38 years old ($SD = 11.74$), ranging from 23 to 75 years, mainly Caucasians ($n = 82$; 98.8%). Almost half of the participants were married or cohabited with the victim at the time of the intervention ($n = 41$; 49.4%) and the length of the relationship ranged from a minimum of six months to a maximum of 50 years ($M = 19.06$, $SD = 12.28$). Most of the participants completed nine years of education ($n = 60$; 72.3%), belonged to a low ($n = 39$; 47%) or medium ($n = 36$;

43.4%) socioeconomic status (SES) and almost half was employed ($n = 41$; 49.4%). More than half of the participants were court-ordered to the intervention program ($n = 54$; 65.1%), 14.5% ($n = 12$) had prior convictions for crimes other than IPV, and 4.8% ($n = 4$) had also been previously convicted for IPV. Table 1 summarizes the main sociodemographic and violence-related variables.

Measures

Dropout. BIP dropout was measured as a categorical variable capturing treatment completers and dropouts. Dropouts included individuals who completed the intake assessment but failed to attend more than 25% of the sessions. Treatment completers included participants who completed the intake assessment and at least 75% of the treatment sessions.

Demographic variables. Demographic information was collected through a brief questionnaire assessing age, relationship length, marital status, socioeconomic status, education grade, professional status, and race.

Violence-related variables. Criminal history (e.g. prior convictions for IPV and for other crimes) and referral source (court- or self-referred) were assessed through a questionnaire developed for this study. When available, perpetrators' criminal files were also analysed.

IPV frequency was assessed using the *Marital Violence Inventory* (IVC; Machado et al., 2007). IVC is a 21-item inventory, reporting physically abusive behaviour, emotionally abusive behaviour, and coercion/intimidation behaviour, scored in a 3-point scale (0 = never, 1 = once, 2 = more than once). Items are grouped along two scales (Physical Violence

Table 1 . Sociodemographic and violence-related variables.

	N	%
Marital status		
Married/in cohabitation	41	49.4
Not married/not in cohabitation	39	47
Educational level		
4th grade	23	27.7
6th grade	20	24.1
9th grade	17	20.5
12th grade/College	18	21.7
Socioeconomic status		
Low	39	47
Medium/High	40	48.2
Ethnicity		
Caucasian	82	98.8
Black	1	1.2
Professional status		
Active	41	49.4
Inactive	42	50.6
Prior convictions		
Yes	12	14.5
No	71	85.5
Prior convictions by IPV		
Yes	4	4.8
No	77	92.8
Referral source		
Court-referred	54	65.1
Self-referred	29	34.9

and Psychological Violence) and a total score of the frequency of violence. In this study, the internal consistency for the total scale was .87, and .86 and .70 for physical and psychological violence scales, respectively.

Intrapersonal variables. Intrapersonal information was collected through a series of psychological self-report questionnaires, filled in the pre-treatment assessment.

The *Buss-Perry Aggression Questionnaire* (BPAQ; Buss & Perry, 1992) is a self-report instrument constituted by 29 items evaluated on a scale of 5 points, ranging from 1 (*extremely uncharacteristic of me*) to 5 (*extremely characteristic of me*). It is composed of four subscales: Physical Aggression, Verbal Aggression, Anger, and Hostility. The internal consistency values vary from .72 and .85, concerning the four subscales, and .89 for the total scale. In this sample, the internal consistency for the total score was of .86, and ranged between .50 (hostility) and .76 (anger) for the different scales.

The *Attitudes Toward Marital Violence Scale* (ECVC; Machado et al., 2007) is a 25-item scale, coded in a 5-point scale, ranging from 1 (*completely disagree*) to 5 (*completely agree*), and assesses attitudes toward IPV. Factorial analysis revealed four factors: Legitimation and Minimization of Minor Violence, Legitimation of Violence Due to Women's Behaviour, Legitimation of Violence Due to External Causes, and Legitimation of Violence Due to Family Privacy. A higher score means attitudes supporting IPV. The correlation between each factor and the total score varies between .34 and .71, and the internal consistency for the total score is .93 (Machado et al., 2007). In the present study, the internal consistency for the total score was .92.

The *Problem-Solving Inventory* (IRP; Serra, 1987) is a multidimensional scale to assess coping strategies. The inventory is composed of 40 items, coded on a 5-point Likert-type scale, ranging from 1 (*not agree*) to 5 (*agree very much*). It presents a total score and nine factors: Request for Help, Confrontation and Active Problem Solving, Passive Abandonment at the Situation, Internal/External Control of the Problems, Strategies of Emotions' Control, Active Attitude of Non-Interference in Everyday Life by Occurrences, Internalized/Externalized Aggression, Self-Accountability and Fear of Consequences, and Confronting the Problems and Planning Strategies (Serra, 1987). The higher the score, the better the coping strategies used by the individual. The inventory showed temporal stability, with a test-retest correlation of .81 and internal consistency of .86. In the present study, the internal consistency for the total scale was .78. The alphas for the nine scales ranged between .43 (Self-Accountability and Fear of Consequences) and .71 (Passive Abandonment at the Situation).

The *University of Rhode Island Change Assessment Scale-Domestic Violence – Revised* (URICA-DV-R) (Levesque et al., 2000) is a self-report scale that assesses the stages of change according to the Transtheoretical Model. URICA-DV-R assesses men's readiness to change violent behaviour toward their intimate partners. It is composed by 20 items, answered on a 5-point Likert-type scale (1 = *strongly disagree* until 5 = *strongly agree*). The scale discriminates four stages of change: Precontemplation, Contemplation, Action and Maintenance. The instrument also provides a global Readiness of Change Index. Scaled scores for each stage dimension are calculated by taking the unweighted sum of the five items representing each dimension, and converting those scores into standard T-scores (Levesque et al., 2000). Levesque et al. (2000) reported internal consistency ranging from .68 (Maintenance) to .81 (action). In the present sample, the internal consistency ranged from .45 for the Precontemplation scale to .83 for the Contemplation scale.

Procedure

The sample of the present study was composed of male individuals who participated in the PPRIAC. The program was delivered in two different settings: the Unit of Justice and Community Psychology of the Psychology Service of University of Minho and a family-support institution in the North of Portugal. Participants were referred to the intervention by the court, child protection services, victim-support and family-support institutions, probation services or were self-referred. Potential participants were subjected to a screening interview. All the procedures were explained to the participants as well as its voluntary nature. Those who met the criteria described below and agreed to participate in the study signed an informed consent, and completed a set of psychological measures. No financial support or compensation were granted for participation in the study.

Ethics procedures concerning privacy and data protection established by the Portuguese legislation were followed. The study was approved by the Subcommittee on Ethics of Social and Human Sciences of the University of Minho.

Data analysis

All the analyses were conducted using the SPSS software (Statistical Package for the Social Sciences) Version 27. Descriptive statistics were performed using measures of central and dispersion tendency, and frequencies to describe the sociodemographic and violence-related variables, and intrapersonal characteristics. T-tests and chi-squared testes were used to analyse differences between dropouts and completers. A logistic regression was conducted to identify the variables that best predicted dropout. Finally, the predictive power of the model generated by this procedure was estimated by using the Receiver Operating Characteristic (ROC) analysis. The ROC curve is a graph that plots sensitivity against specificity and thus presents a graphical representation of the trade-off between the positive and negative predictive values at every possible cut-off. The area under the curve (AUC) is used to measure the accuracy of the model. The AUC ranges from .50 and 1, and a higher value indicates a greater effectiveness of the model.

Results

Participation

Forty-eight of the eighty-three participants completed the intervention program, reflecting a completion rate of 57.8% (and a dropout rate of 42.2%). In average, treatment completers attended more than three-quarters of the intervention program ($M = 21.22$; $SD = 2.23$), meaning that they were present in 21 of the 24 core sessions, representing almost 42 h of treatment (each session varies between 90 and 120 min). In contrast, dropouts attended just over a quarter of the intervention program ($M = 8.40$; $SD = 4.93$), which equates to eight sessions and 16 h of treatment. This difference in treatment dosage was highly significant, $t(74) = 15.649$, $p < .001$. The main reasons for abandoning the intervention were: 1) voluntary failure to attend the sessions ($n = 29$); 2) changing the city or the country where they lived ($n = 3$); or 3) illness ($n = 3$).

Characteristics of dropouts and completers

Table 2 presents the descriptive statistics for both groups in terms of sociodemographic and violence-related variables. Groups only revealed a statistically significant difference in the history of previous convictions by other crimes than IPV, $\chi^2(1) = 6.200$, $p = .013$, with dropouts presenting more previous convictions than completers.

Table 3 displays data for both dropouts and completers in terms of age, relationship length, BPAQ total score and subscales, ECVC total score and factors, IRP total score and factors, IVC total score and subscales, and URICA-DV-R Readiness to Change Index and stages of change. Results only showed statistically significant differences between dropouts and completers in age, $t(76) = -2.565$, $p = .012$, being dropouts younger than completers.

Dropout prediction

A logistic regression was performed to identify the variables that predict treatment dropout. According to the preliminary findings, two variables were entered in the model (i.e. age, and prior convictions by other crimes than IPV). The results are summarized in Table 4.

The logistic regression model was statistically significant, $\chi^2(2) = 12.878$, $p = .002$. According to the pseudo r-square, between 15.2% (Cox & Snell) and 20.5% (Nagelkerke) of the variability was explained by this set of variables. This model classified correctly

Table 2 . Differences between dropouts and completers in sociodemographic and violence-related variables

	Dropouts M (SD)	Completers M (SD)	<i>t</i>	<i>p</i>	95% CI	<i>d</i>
Age	42.44 (11.94)	49.13 (10.89)	-2.523	0.012	[-11.89, -1.50]	0.59
Relationship length	17.70 (11.96)	19.97 (12.53)	-0.773	0.442	[-8.15, 3.60]	-
IVC Total	8.74 (6.67)	9.44 (7.32)	-0.443	0.659	[-3.81, 2.43]	-
Physical	4.80 (5.62)	5.41 (5.63)	-0.404	0.688	[-3.62, 2.40]	-
Psychological	5.28 (2.88)	5.78 (3.97)	-0.532	0.597	[-2.39, 1.39]	-
	Dropouts N (%)	Completers N (%)	χ^2	<i>p</i>	Cramer V	
Marital status						
Married/in cohabitation	17 (51.5)	24 (51.1)				
Not married/not in cohabitation	16 (48.5)	23 (48.9)	0.002	0.574	-	
Educational level						
4th grade	8 (25)	15 (32.6)	2.241	0.524	-	
6th grade	7 (21.9)	13 (28.3)				
9th grade	7 (21.9)	10 (21.7)				
12th grade/College	10 (31.3)	8 (17.4)				
SES						
Low	16 (48.5)	23 (50.0)	0.018	0.534	-	
Medium/High	17 (51.5)	23 (50.0)				
Professional status						
Active	14 (40.0)	27 (56.3)	2.138	0.107	-	
Inactive	21 (60.0)	21 (43.8)				
Prior convictions						
Yes	9 (25.7)	3 (6.3)	6.2	0.013	0.273	
No	26 (74.3)	45 (93.8)				
IPV prior convictions						
Yes	3 (8.8)	1 (2.1)	1.884	0.17	-	
No	31 (91.2)	46 (97.9)				
Referral source						
Court-referred	23 (65.7)	31 (64.1)	0.011	0.552	-	
Self-referred	12 (34.3)	17 (35.4)				

Note. IVC = Marital Violence Inventory.

Table 3 . Differences between dropouts and completers in intrapersonal variables

	Dropouts M (SD)	Completers M (SD)	<i>t</i>	<i>p</i>	95% CI
URICA RCI	38.62 (12.87)	35.66 (12.46)	1.047	0.296	[-2.63, 7.04]
URICA PC	12.70 (4.28)	13.43 (3.45)	-0.785	0.435	[-2.57, 1.12]
URICA C	19.03 (5.44)	17.28 (5.28)	1.362	0.178	[-.82, 4.33]
URICA A	20.43 (4.93)	19.08 (4.71)	1.17	0.246	[-.96, 3.68]
URICA M	12.03 (4.63)	12.50 (5.29)	-0.385	0.701	[-2.89, 1.95]
BPAQ Total	62.83 (16.10)	62.44 (15.24)	0.113	0.911	[-6.51, 7.29]
BPAQ PA	18.36 (5.40)	16.05 (5.30)	1.731	0.088	[-.35, 4.96]
BPAQ VA	12.03 (3.39)	12.10 (2.86)	-0.086	0.931	[-1.55, 1.42]
BPAQ A	14.86 (5.17)	15.34 (5.25)	-0.379	0.706	[-3.01, 2.05]
BPAQ H	17.33 (5.45)	18.18 (4.72)	-0.38	0.492	[-3.27, 1.59]
ECVC Total	88.03 (27.17)	90.90 (22.19)	-0.529	0.599	[-13.66, 7.93]
ECVC F1	24.57 (8.65)	26.15 (7.42)	-0.89	0.388	[-5.09, 1.95]
ECVC F2	27.09 (9.36)	28.13 (7.14)	-0.574	0.568	[-4.64, 2.56]
ECVC F3	27.54 (7.36)	27.56 (6.68)	-0.013	0.99	[-3.10, 3.06]
ECVC F4	8.83 (3.62)	9.06 (3.08)	-0.318	0.752	[-1.70, 1.23]
IRP Total	141.83 (16.11)	141.54 (13.89)	0.087	0.931	[-6.29, 6.86]
IRP F1	16.00 (3.65)	15.27 (3.46)	0.927	0.357	[-.84, 2.30]
IRP F2	23.49 (3.54)	23.67 (3.79)	-0.221	0.826	[-1.81, 1.45]
IRP F3	12.09 (2.73)	11.92 (3.02)	0.262	0.794	[-1.11, 1.45]
IRP F4	29.46 (5.39)	28.58 (5.22)	0.743	0.46	[-1.47, 3.21]
IRP F5	15.77 (3.20)	15.69 (3.35)	0.115	0.909	[-1.37, 1.54]
IRP F6	11.20 (1.91)	11.42 (1.41)	-0.595	0.553	[-.94, .51]
IRP F7	9.26 (1.38)	9.29 (1.43)	-0.11	0.912	[-.66, .59]
IRP F8	13.66 (2.95)	14.81 (3.25)	-1.663	0.1	[-2.54, .23]
IRP F9	10.91 (2.09)	10.90 (2.33)	0.037	0.97	[-.97, 1.01]

Note. URICA RCI = University of Rhode Island Change Assessment Scale-Domestic Violence Readiness of Change Index; URICA PC = Precontemplation; URICA C = Contemplation; URICA A = Action; URICA M = Maintenance; BPAQ = Buss-Perry Aggression Questionnaire; BPAQ PA = Physical Aggression; BPAQ VA = Verbal Aggression; BPAQ A = Anger; BPAQ H = ire Hostility; ECVC = Attitudes Toward Marital Violence Scale; ECVC F1 = Legitimation and Minimization of Minor Violence, ECVC F2 = Legitimation of Violence Due to Women’s Behaviour; ECVC F3 = Legitimation of Violence Due to External Causes; ECVC F4 = Legitimation of Violence Due to Family Privacy; IRP = Problem-Solving Inventory; IRP F1 = Request for Help; IRP F2 = Confrontation and Active Problem Solving; IRP F3 = Passive Abandonment at the Situation; IRP F4 = Internal/External Control of the Problems; IRP F5 = Strategies of Emotions’ Control; IRP F6 = Active Attitude of Non-Interference in Everyday Life by Occurrences; IRP F7 = Internalized/Externalized Aggression; IRP F8 = Self-Accountability and Fear of Consequences; IRP F9 = Confronting the Problems and Planning Strategies.

69.2% of all cases. A separate analysis of the variables used in the prediction of treatment dropout made it possible to verify that age (OR = .948; 95% CI [.906, .991]) and previous criminal convictions (OR = 5.647; 95% CI [1.335, 23.883]) significantly contribute to the model. Batterers that were younger and with previous criminal convictions were more likely to dropout from intervention. For each unit increase in age, the odds of an IPV’s perpetrator to not complete the intervention program decreased by a factor of .948. Besides, the odds of a batterer to dropout from intervention was 5.647 times higher for those batterers who had previous criminal convictions than for those who had no previous criminal convictions.

Table 4 . Logistic regression model predicting dropout

	B	S.E.	Wald	<i>p</i>	Exp(B)	95% C.I. para EXP(B)	
						L	H
Age	-.054	.023	5.510	.019	.948	.906	.991
Prior convictions	1.731	.736	5.536	.019	5.647	1.335	23.883
Constant	1.829	1.056	3.002	.083	6.227		

Note. CI = confidence interval.

The ROC curve analysis revealed that the AUC was .739 ($p < .001$; 95% CI [.622, .857]), which was significantly greater than .50, meaning that the generated model significantly predicted dropout.

Discussion

This study was designed to increase our understanding about dropout predictors among court- and self-referred batterers who attended a BIP in Portugal. The current work extends previous research on BIPs' dropout by including sociodemographic (e.g. age, marital status, socioeconomic status), violence-related (e.g. criminal record, referral source), and intrapersonal variables (e.g. motivation, aggression, attitudes toward intimate partner violence, coping skills). Besides, to the best of our knowledge, this is the first study conducted in Portugal assessing variables related to batterers' treatment dropout.

The dropout rate of 42.2% found in this study is similar to previous studies (e.g. Mach et al., 2020). The high rates of attrition among BIPs are one of the most well known problems since it is associated with an increasing likelihood to re-offend (e.g. Bennett et al., 2007; Carney et al., 2006; Gondolf, 2000; Olver et al., 2011). One possible explanation for the high rates of dropout in the present study is the fact that PPRIAC is free of charge. Literature indicates that when treatment is paid by the individuals, dropout rates tend to be lower (Timko et al., 2015). Another possible explanation is that most of the participants were court-mandated. Also, the self-referred participants might have entered treatment as a result of external pressure and not voluntarily (e.g. child protection services; wives' requests to change their behaviours; Eckhardt et al., 2008; Kistenmacher & Weiss, 2008). Although PPRIAC includes Motivational Interview techniques (Miller & Rollnick, 2002), as dropout frequently occurs in the first sessions, participants' lack of motivation and/or engagement in the process of change may lead them to abandon the intervention. Besides, the inconsistent court responses to clients who dropout might be another factor that explains high attrition rates (Adams, 2003). The considerably high rates of attrition lead us to recommend courts to more consistently apply sanctions to those who dropout. This might increase batterers' awareness of the consequences of dropout, and therefore increase treatment compliance (Bowen & Gilchrist, 2006). Also, the creation of specialist domestic violence (DV) courts might be a way to facilitate the early referral of batterers to BIPs, and the continuous supervision of men who attend treatment, contributing to prevent dropout. In the US, where specialized courts in DV exist, a significant dropin and higher treatment completion rates were observed (Gondolf, 2000).

Dropouts were younger and had more previous convictions for other crimes than IPV completers. Other sociodemographic, violence-related, and intrapersonal variables did not distinguish the groups as reported in previous studies (e.g. Bowen & Gilchrist, 2006; Cantos et al., 2015; Catlett et al., 2010; Gover et al., 2011; LaPosta et al., 2019; Lauch et al., 2017; Richards et al., 2021). Our results suggest that Portuguese batterers who dropped out had a more unstable lifestyle and a low stake, in conformity with other studies (e.g. Bowen & Gilchrist, 2006). As Bowen and Gilchrist (2006) referred, these results may reflect incongruence between the program content and offender's social circumstances (p. 583). PPRIAC focus on men's attitudes, beliefs and behaviours, and men's responsibility in violence against their intimate partners, which might be

more compatible with learning styles of participants with a more stable lifestyle, i.e. those who have a more prosocial behaviour (Daly et al., 2001).

As previous studies have found, older batterers tend to complete BIPs more than younger ones (e.g. Askeland & Heir, 2013; Bowen & Gilchrist, 2006; Buttell & Carney, 2008). Perhaps older batterers were more mature (Lauch et al., 2017) and had a greater insight into their problematic behaviour and, as a consequence, perceived treatment more positively, and as an opportunity to change their problematic behaviour – the so-called client-treatment congruence (Bowen & Gilchrist, 2006). A mismatch between a client's perceived need and the therapy goals is the most cited reason to abandon intervention (Brown et al., 1997). Older individuals may also be more aware of the implications of their actions, both in terms of impact of their abusive behaviour on victims, and in terms of legal consequences associated with the non-completion of the intervention.

Interestingly, the variables that, in our study, distinguished completers from dropouts were the same that were related both to IPV recidivism (e.g. Cattaneo & Goodman, 2005; Hanson & Wallace-Capretta, 2004; Stith et al., 2004), and general recidivism (e.g. Eisenberg et al., 2019; Gendreau et al., 1996). Individuals who fail to complete intervention programs seem to resemble the generally violent/antisocial group identified by Holtzworth-Munroe and Stuart (1994); i.e. a high-risk group of batterers, as IPV appears in conjunction with a more generalized antisocial behaviour. In fact, studies on batterer typologies also found that generally violent/antisocial perpetrators were more likely to dropout (e.g. Cantos et al., 2015; Mach et al., 2020). Thus, BIPs should be sensitive to these factors, adapting the intervention dosage, and tailoring the service supervision to the individuals' characteristics. A batterer would be better served if the treatment program focused its attention to the needs of each individual (Cunha & Gonçalves, 2013). This is in line with Bonta and Andrews's (2017) principles of risk, need and responsibility that should be considered during the design of intervention programs, to maximise intervention effectiveness and reduce attrition rates. It is necessary to match the level of the program's intensity to the offender's risk level (risk principle), to target the offender's needs that are functionally related to criminal behaviour (need principle), and to match the style and mode of intervention to the offender's learning style and abilities (responsivity principle; Andrews et al., 2011). Thus, younger individuals with a prior criminal record might benefit from an intervention with a multimodal and multilevel focus, i.e. promoting batterer's skills and tackling antisocial traits together with IPV specific treatment (Bowen & Gilchrist, 2006; Cunha & Gonçalves, 2013), as well as monitoring to keep their adherence to treatment.

The other sociodemographic variables considered in the analysis demonstrated absence of relationship with dropout. Although this result differs from most previous studies (e.g. Barber & Wright, 2010; Catlett et al., 2010; Gover et al., 2011), other authors have found a similar pattern (e.g. Buttell & Carney, 2002, 2008; Pike & Buttell, 2002). A possible explanation for these results may be related to cultural differences of the samples (e.g. Buttell & Carney, 2008). Other admissible explanation may be associated with the intervention program studied, and its inclusion and exclusion criteria, which might lead to a decrease in sample heterogeneity. At the same time, the inconsistencies found in dropout literature may be related to differences between studies in terms of therapists, programs involved, dropout definitions, treatment settings, and methods used to assess the different constructs (Babcock et al., 2004; Catlett et al., 2010; Cuevas & Bui, 2016).

Regarding the referral source, no statistically significant differences were found between dropouts and completers. The absence of differences between groups may reflect regional differences in the judicial support given to intervention programs (e.g. Buttell & Carney, 2002; Pike & Buttell, 2002), and the inconsistent court responses to batterers who dropout (e.g. Babcock & Taillade, 2000). In regions where judicial support is scarce, there might be a lower probability of legal consequences for the lack of batterers' attendance to the intervention program, resulting in higher dropout rates. Although these inferences do not refer to the Portuguese judicial system, to our knowledge, men who dropout from BIPs did not receive consistent consequences, although the law considers the possibility of suspended prison sentences or provisional suspension processes' revocation. Thus, and since the judicial support given to the intervention program may interact with sociodemographic and intrapersonal variables to predict the treatment dropout (e.g. Buttell & Carney, 2002), this variable should be included in future studies.

Treatment dropouts and completers did not differ in their levels of self-reported violence, attitudes toward IPV, aggression, coping skills, and motivation level. These results may be due to the fact that the data included in this study refers to the pre-intervention phase. Thus, considering the inclusion and exclusion criteria, it may be expected that there are no major differences between individuals in this phase of the intervention. Another possible explanation for these results may be related to social desirability. There is evidence showing that people respond differently to self-report questionnaires when they perceive that their answers may have personal (Davis & Moser, 2014), and possibly, legal implications. At the same time, research shows that social desirability may affect the stage of self-reported change by individuals (Zemore, 2012). Thus, the fact that no differences were found in the individuals' motivational stage may be due to some reported high motivational levels to change that rapidly diminished, or, on the contrary, individuals who initially reported lower motivation might have increased their desire to change throughout the intervention process. At last, our results reveal that some individuals abandon the intervention program for different reasons (e.g. illness). Therefore, to obtain a more in-depth understanding of the relationship between intrapersonal characteristics and treatment attrition, future studies should explore the explicit reasons for non-compliance (Bowen & Gilchrist, 2006), as well as other factors that may influence the treatment conclusion (Lauch et al., 2017).

The logistic regression results also support the role of age and prior convictions in BIPs' dropout. Being younger and having previous convictions by other crimes than domestic violence significantly predicts treatment dropout. However, from the generated model, 31.3% of batterers were incorrectly classified, suggesting that perhaps other variables not studied here may also play an important role in attrition. For example, external factors to the individual, such as the cost of the sessions, the duration of the program, the distance travelled to participate in the sessions, program curricula, and external monitoring might impact individuals' attendance and/or attrition, and should be included in future studies.

Despite the findings, some limitations to this study should be mentioned. First, our sample was small and nonrepresentative, being entirely composed of heterosexual men from the north of Portugal, and the vast majority being Caucasian. Thus, a larger and more ethnically diverse sample is recommended for future studies. Second, this study only refers to data from one specific intervention program, so it is not possible

to generalise these results to other programs. Third, in this study, the variables analysed were mainly assessed through batterers' self-report. This may affect the results since literature suggests that batterer's reports are affected by social desirability (Dutton & Hemphill, 1992). Thus, future research should also include an instrument to assess social desirability. Fourth, the alpha values from some scales (e.g. IRP, BPAQ, URICA-DV-R) were weak, which might compromise the results. Finally, variables related to the intervention program (e.g. treatment modality; treatment setting), the therapeutic process (e.g. group cohesion; working alliance), court supervision/monitoring, and social support were not analysed in this study. Thus, future studies should include those factors to understand their impact on treatment dropout and/or compliance (e.g. Jewell & Wormith, 2010; Olver et al., 2011).

To our knowledge, the current study provides the first insight into the sociodemographic, violence-related, and intrapersonal characteristics of Portuguese batterers who failed to complete a treatment program directed to both court- and self-referred individuals. Our findings corroborate international literature on BIPs' dropout and show that variables that predict attrition are the same that predict IPV and general recidivism. Besides, these results highlight the importance of matching BIPs to offenders' risk, needs and responsivity in order to increase intervention efficacy and treatment compliance.

Data availability statement

Data is available upon request to the authors.

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