

Cyber dating abuse: Sex, substance use and relationship length

Ciberabuso no namoro: Sexo, uso de substâncias e tempo de duração da relação

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ABSTRACT

New technologies have grown exponentially in recent years, and they have been associated with phenomena such as cyber dating abuse. This study, carried out in Portugal, aimed to investigate whether there are differences in cyber dating abuse between sexes, to study the relationship between cyber dating and substance use, and between cyber dating abuse and relationship length. In this study participated 894 higher education students, aged between 17 and 56 years old. The Cyber Dating Abuse Questionnaire and the Drug Abuse Screening Test were used. Regarding to sex, the results showed statistically differences between some cyber dating abuse factors. It was also found that substance use was positively related to all cyber dating abuse factors. Moreover, it was observed that individuals who had been in a longer relationship practiced more acts of control. Possible justifications for the results, as well as practical implications of the results, are discussed.

Keywords: cyber dating abuse, sex, substance use, relationship length

RESUMO

As novas tecnologias têm crescido exponencialmente nos últimos anos, e têm sido associadas a fenômenos como o ciberabuso no namoro. Este estudo, realizado em Portugal, teve como objetivos investigar se existem diferenças no ciberabuso no namoro entre sexos, estudar a relação entre o ciberabuso no namoro e o uso de substâncias e, também, entre o ciberabuso no namoro e o tempo de duração da relação. Participaram neste estudo 894 estudantes do ensino superior, com idades entre os 17 e os 56 anos. Foi utilizado o Questionário sobre Ciberabuso no Namoro e o Drug Abuse Screening Test. No que diz respeito ao sexo, os resultados evidenciaram diferenças estatisticamente significativas em alguns fatores do ciberabuso no namoro. Verificou-se ainda que o uso de substâncias estava positivamente associado com todos os fatores do ciberabuso do namoro. Além disso, foi observado que indivíduos que estavam há mais tempo numa relação praticaram mais atos de controlo. Possíveis justificações para os resultados, bem como implicações práticas dos mesmos, são objeto de discussão.

Palavras-chave: ciberabuso no namoro, sexo, uso de substâncias, tempo de duração da relação

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In the last years, the use of new technologies has grown exponentially (Villora et al., 2019b) and, until September 2020, almost five billion people worldwide used the Internet (Internet World Stats, 2020). Nowadays, new technologies are an essential part of most individuals' lives (Borrajo et al., 2015a). However, despite their benefits, they carry potential risks (Yudes-Gómez et al., 2018), like cyber dating abuse (Caridade & Braga, 2019).

Cyber dating abuse is a cybercrime (Curry & Zavala, 2020) and it is defined as the physical, sexual or psychological violence that occurs, within a dating relationship, through new technologies and digital media (Hinduja & Patchin, 2020; Zweig et al., 2014). It can be perpetrated by and against the partner or ex-partner and can occur both during adolescence and adulthood (Fernet et al., 2019; Lara, 2020). As for the behaviors that this type of violence includes, these can be grouped into two categories: direct aggression and control. Direct aggression reflects the aggressive behavior carried out, through new technologies, with the intention of injuring the partner/ex-partner (e.g. threats) and, in turn, control is the use of new technologies to control the partner/ex-partner (e.g. using their passwords without authorization; Borrajo et al., 2015b).

The phenomenon of cyber dating abuse presents quite diverse prevalences, and in the studies analyzed in the systematic review of Caridade et al. (2019), they observed prevalences between 5.8% and 92% regarding victimization and between 8.1% and 93.7% in the perpetration factor.

In a study carried out in the United States, with a sample of 261 college students, about 68% reported having experienced at least one cyber dating abuse behavior while 73% claimed to have perpetrated it (Curry & Zavala, 2020). In a study carried out by Toplu-Demirtaş et al. (2020) in Turkey, with 390 college students, it was observed that 67% perpetrated some cyber dating abuse behavior during the last six months. Additionally, Lara (2020), in a study carried out with 1538 Chilean teenagers and university students, found that about three quarters of the sample reported being a victim or perpetrator of cyber dating abuse. In the European context, in Spain, Borrajo et al. (2015a) found that, in a sample of 433 college students, more than a half were, in the last six months, victims of some cyber dating abuse behavior.

In the Portuguese context, in a sample of 272 individuals (mostly university students), Caridade and Braga (2019) observed a prevalence of 59.2% in terms of victimization and 66.9% in terms of perpetration. In 2020, lower prevalence rates were reported. From a sample of 173 adolescents and young adults (of which 48.6% were university students), Caridade et al. (2020b) observed that 40.2% had been victims of some cyber dating abuse, with the perpetration percentage being 42.2%. In another study, in which 145 adolescents and young adults (64.2% university students) participated, 26.2% stated that they had suffered some cyber dating abuse and 29% assumed to have perpetrated it (Caridade et al., 2020a).

In order to understand cyber dating abuse, different sociodemographic, personal and relationship factors have been investigated, namely sex (Villora et al., 2019a), substance use (Peskin et al., 2017) and relationship length (Sánchez et al., 2015).

There are several studies that link cyber dating abuse with sex, but there is no consensus in the literature. On one hand, there are studies where it was observed that males presented higher cyber dating abuse values (Durán-Segura & Martínez-Pecino, 2015; García-Sánchez et al., 2017). On the other hand, there are studies that reveal that females presented higher values (Villora et al., 2019a; Zweig et al., 2013). There are also studies in which no significant differences were found regarding the participants' sex (Borrajo et al., 2015a; Caridade & Braga, 2020; Curry & Zavala, 2020; Reed et al., 2016; Smith et al., 2018), being observed, however, differences regarding its consequences, which seems to be more harmful for females (Reed et al., 2017).

Substance use is a phenomenon that has adverse effects on public health (Osman et al., 2016) and, according to Allen et al. (2017), when compared to the post-university period, the opportunity for substance use among university students is higher, and, therefore, its use is a significant problem in this population (Skidmore et al., 2016).

Substance use may increase violence, and, in this sense, several studies have indicated the presence of a positive association between violence within a love relationship and substance use (Cafferky et al., 2018; Sabina et al., 2017). As for cyber dating abuse, Peskin et al. (2017) reported that behavioral variables such as the use of alcohol or drugs were associated with a higher probability of perpetrating cyber dating abuse. Moreover, Caridade and Braga (2020) conducted a meta-analysis in which they found that behavioral factors such as the use of alcohol and drugs can contribute to the occurrence of cyber dating abuse, and that young people who use either of these substances (or both) constituted themselves as a high-risk group. Van Ouytsel et al. (2017) also observed that young people who use substances are more likely to perpetrate cyber dating abuse.

Furthermore, violence can have several negative health consequences, namely the use of alcohol and drugs, and victimization within a dating relationship can result in alcohol and drugs use (Mulla et al., 2020), being that, for example, victims can use these actions as coping mechanisms (Parker & Bradshaw, 2015; Sabina et al., 2017). Furthermore, Baker (2016) observed that adolescents reported using alcohol and/or drugs after ending their relationships to deal with the breakup, but also to deal with the fact that they were in an abusive relationship.

Relationship length can contribute to an increased risk of dating violence perpetration, being observed that longer relationships are more likely to have conflicts, which may culminate in violence (The Portuguese Association for Victim Support, 2011). Regarding the influence of relationship length on cyber dating abuse, literature is still scarce. In the study of Van Ouytsel et al. (2018) it was observed that, in a sample of high school students, relationship length was positively associated with victimization by control. However, in another study, the authors observed that cyber dating abuse and relationship length were not associated (Sánchez et al., 2015).

Thus, given the fact that research about cyber dating abuse is still recent and the scarcity of studies regarding it, particularly in the Portuguese context, this study aims to contribute to the increase of cyber dating abuse knowledge, as well as about its relationship with substance use and relationship length. It is also hoped that the results will contribute to the development of prevention and intervention programs that are more aware of these issues.

In this sense, the present study aims to: (i) analyze the prevalence of cyber dating abuse and its factors; (ii) verify the existence of differences in cyber dating abuse between sexes; (iii) investigate the relationship between cyber dating abuse and substance use and (iv) investigate whether there is a relationship between cyber dating abuse and relationship length, in higher education students, in Portugal.

Method

Study design

This study is characterized as a quantitative and cross-sectional study since the nature of the data is quantitative and it was collected in a single moment. In addition, it is based on the correlational paradigm, given that it is intended to understand the degree and form of association between the variables analyzed (Marôco, 2014).

Participants

The sample was initially formed by 1132 subjects, having been reduced to 894 participants after excluding those who had never been in a dating relationship or whose instruments were not properly filled out. Of the total participants, 485 (54.3%) were female and 409 (45.7%) were male, aged between 17 and 56 years ($M = 21.27$, $SD = 3.69$). As for the cycle of studies, of the respondents, 633 (72.9%) attended the 1st cycle, 227 (26.1%) the 2nd cycle and eight (1%) the PhD. Regarding the relationship status, 554 (62%) participants reported being in a relationship and, of the respondents, 10 said they had been in a relationship for less than a month, 81 between one to six months, 64 between seven to 11

months, 256 between one to three years, 105 between four to seven years, 24 between eight to 11 years and nine for more than 11 years. Of the 340 (38%) participants who claimed not to be in a dating relationship, 187 (20.9%) reported that they had been in a dating relationship less than a year ago and 153 (17.1%) reported that they hadn't.

Instruments

We used a sociodemographic Questionnaire designed to collect information about the participants' personal data, which included questions related to their sex, age and cycle of studies. Participants were also asked if they were in a dating relationship at the time, and about its length. In case they were not involved in a dating relationship, it was asked if they had recently been in one, that is, less than a year ago.

To assess cyber dating abuse, we used the Portuguese version of Cyber Dating Abuse Questionnaire (CibAN; Caridade & Braga, 2019). It is a self-report instrument, composed of 40 items, answered on a Likert-type scale, and it allows to estimate the patterns of victimization and perpetration, covering two types of abuse: control (e.g. "My partner or ex-partner has already confirmed the hours of my last call on phone applications") and direct aggression (e.g. "My partner or ex-partner has already threatened to divulge secrets or compromising information about me, using new technologies"). Thus, there are in total four factors - victimization by direct aggression, victimization by control, perpetration by direct aggression, and perpetration by control (Borrajo et al., 2015b).

Regarding its psychometric properties, Caridade and Braga (2019) obtained a Cronbach's α of .86 in the victimization by direct aggression factor and a Cronbach's α of .91 in the victimization by control factor. Also, a Cronbach's α of .89 was obtained in the perpetration by direct aggression factor, while in the perpetration by control factor, the Cronbach's α was .84.

A confirmatory factor analysis of the instrument was carried out for the present sample and the values obtained in the adjustment modification indices proved to be adequate (Marôco, 2014): $\chi^2 / df = 12.137$, CFI = .673, GFI = .664, RMSEA = .112, and $P [rmsea \leq .05] = .000$. All but one of the CibAN items had high factor weights ($\lambda \geq .5$) and adequate individual reliability ($R^2 \geq .25$). Regarding Cronbach's α in the present sample, a value of .915 was obtained for total victimization, .872 for victimization by direct aggression factor, and .899 for victimization by control factor. Regarding total perpetration, a Cronbach's α of .880 was obtained and a Cronbach's α of .901 and .812 were obtained in the perpetration by direct aggression and perpetration by control factors, respectively.

To assess substance use, the Drug Abuse Screening Test (DAST; Skinner, 1982) was used, which is a self-report scale of 20 items of dichotomous response (Yes/No). It assesses the possible involvement of individuals with drugs (cannabis, inhalants, tranquilizers, cocaine, hallucinogenic or narcotic stimulants) through questions related to their use (e.g. "Have you used other drugs than the ones necessary for medical reasons?"). The total is obtained by adding the score of the items, and in the 4th and 5th items each answer "Yes" is equivalent to "0" points. A score of 0 is indicative that no evidence of problems related to substance use was found, from 1 to 5 points is considered low severity, from 6 to 10 intermediate severity, from 11 to 15 substantial severity and from 16 to 20 "severe" severity (Skinner, 1982).

In the original version, a Cronbach's α of .86 was obtained (for the subsample that excluded individuals with problems only related to alcohol use; Skinner, 1982). In turn, the results of a Portuguese study carried out by Machado and Klein (2006) with individuals with drug addiction problems revealed a Cronbach's α of .74.

In the present study, the scale presented a good internal consistency, with a Cronbach's α of .781. The confirmatory factor analysis of the instrument for the present sample revealed a poor adjustment quality and a poor adjustment index ($\chi^2 / df = 7.527$, CFI = .794, GFI = .869, RMSEA = .085, and $P [rmsea \leq .05] = .000$) (Marôco, 2014). Most items had high factor weights and adequate individual reliability.

Data collection procedure and ethical considerations

This investigation was submitted to the Ethics Committee of the institution where the study was conducted. Data collection took place in two ways: through an online questionnaire posted on social media, and in person, by one of the researchers, in a classroom context at the university where the study was conducted. Both versions included an informed consent with the explanation of the objectives, the conditions to participate, the data confidentiality and the voluntary participation in the study. The estimated filling time was approximately 10 min.

Data analysis strategy

Initially, descriptive statistics analysis mean (*M*) and standard deviation (*SD*) were performed. Then, the symmetry analysis of the frequency distribution (univariate normality) was fulfilled using the asymmetry and kurtosis coefficients, verifying the adequacy of the use of non-parametric tests.

To study the instruments psychometric characteristics, structural equation analysis was used, using the AMOS software (v.22, SPSS Inc., Chicago, IL). The method used to estimate the unknown parameters of the different trajectories of the model was the maximum likelihood, which provided the standardized estimates of the coefficients (an estimate higher than 0.5 in absolute value indicates a strong association). Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Root-Mean-Square Error of Approximation (RMSEA) fit indices and χ^2 statistics were used to determine the adequacy of the models. A CFI > .90, GFI > .90, and RMSEA < .05 with 90% CI < .10 are acceptable indices of fit for the model and $\chi^2 / df < 2$ is considered to be good (Arbuckle, 2005; Marôco, 2014). Cronbach's α was used to estimate the internal consistency of the instruments.

Subsequently, the prevalence of cyber dating abuse and the types of violence that are part of it were characterized. The Wilcoxon-Mann-Whitney test was performed to determine whether sex and substance use significantly affect the victimization and perpetration factors. The association between cyber dating abuse factors and substance use was measured by Spearman's Correlation Coefficient. To find out if there were differences in cyber dating abuse in relation to relationship length, we used the Kruskal-Wallis test, followed whenever possible by Multiple Comparison of Mean Ranks.

All analyzes were performed using the Software Statistical Package for the Social Sciences (SPSS) - version 25. Statistically significant effects were assumed for $p < .05$.

Results

Prevalence of cyber dating abuse

Of the 554 subjects who claimed to be in a relationship, 327 (59%) reported having already been victims of cyber dating abuse, verifying that 94 (17%) claimed to have been victims of direct aggression and 310 (56%) victims of control. In turn, 371 (67%) participants assumed to have been perpetrators, with 84 (15.2%) reporting having perpetrated some form of direct aggression and 354 (63.9%) some type of control.

Of the 187 subjects who said that they were not in a relationship at the moment but had been less than a year ago, 148 (79.1%) reported having already been victims of cyber dating abuse, with 83 (44.4%) reporting having been victims of direct aggression and 138 (74%) victims of control. Regarding perpetration, 149 (80%) participants assumed to have perpetrated some cyber dating abuse behavior, 69 (37%) reported having perpetrated some type of direct aggression and 143 (76.5%) some form of control.

Of the 153 participants who reported not being currently, nor having been recently in a relationship, that is, in the previous year, 90 (58.8%) claimed to have already experienced some cyber dating abuse behavior, with 51 (33.3%) claiming to have been victims of direct aggression and 84 (54.9%) victims of control. In turn, 79 (51.6%) participants reported having perpetrated some form of cyber dating abuse,

with 26 (17%) claiming to have perpetrated some form of direct aggression and 77 (50.3%) some form of control.

Comparative differential analysis: Cyber dating abuse and sex

According to the results (Table 1), there were statistically significant differences between sexes, both in terms of victimization and in terms of perpetration. By analyzing the mean ranks, it was observed that males had higher scores than females, and these differences were statistically significant in terms of victimization by direct aggression ($U = 89531.000$, $W = 207386.000$, $p = .0005$), victimization by control ($U = 88551.000$, $W = 206406.000$, $p = .002$), total victimization ($U = 86729.500$, $W = 204584.500$, $p = .0005$) and perpetration by direct aggression ($U = 92342.000$, $W = 210197.000$, $p = .005$).

Table 1

Differential comparative analysis of victimization and perpetration factors in relation to sex

	Male (N = 409) Mean Rank	Female (N = 485) Mean Rank	Z	p
VD	471.10	427.60	- 3.278	.001
VC	473.49	425.58	- 2.868	.004
TV	477.95	421.82	- 3.330	.001
PD	464.22	433.40	- 2.546	.011
PC	455.27	440.95	- .849	.396
TP	457.33	439.21	- 1.068	.285

Note. VD: Victimization by Direct Aggression; VC: Victimization by Control; TV: Total Victimization; PD: Perpetration by Direct Aggression; PC: Perpetration by Control; TP: Total Perpetration.

Association between cyber dating abuse and substance use

In order to analyze the association between cyber dating abuse and substance use, Spearman's Correlation Coefficient was determined. The results (Table 2) showed that there were weak, but significant positive correlations between substance use and victimization by direct aggression ($\rho = .238$, $p < .001$), victimization by control ($\rho = .181$, $p < .001$), total victimization ($\rho = .208$, $p < .001$), perpetration by direct aggression ($\rho = .182$, $p < .001$), perpetration by control ($\rho = .143$, $p < .001$), and total perpetration ($\rho = .159$, $p < .001$). As for the association between cyber dating abuse factors, these were positive and strongly correlated with each other.

Table 2

Association between cyber dating abuse and substance use

Variables	VD	VC	TV	PD	PC	TP	DAST
VD	1	.475**	.630**	.658**	.311**	.408**	.238**
VC		1	.963**	.362**	.676**	.682**	.181**
TV			1	.458**	.662**	.699**	.208**
PD				1	.367**	.521**	.182**
PC					1	.971**	.143**
TP						1	.159**
DAST							1

Note. ** $p < .001$; VD: Victimization by Direct Aggression; VC: Victimization by Control; TV: Total Victimization; PD: Perpetration by Direct Aggression; PC: Perpetration by Control; TP: Total Perpetration.

Comparative differential analysis: Cyber dating abuse and substance use

To verify whether substance use significantly influences cyber dating abuse, the Wilcoxon-Mann-Whitney test was used, after dividing the participants into two groups: Group I (participants with scores less than five) and Group II (participants with scores equal to or greater than five) based on Skinner's criteria -which indicate that a score of less or equal to five is considered to be of low severity- and DAST scores obtained in the present study.

According to the results (Table 3), there were significant differences between the groups regarding victimization and its factors. By analyzing the mean ranks, it was found that Group II had higher values than Group I, with these differences being statistically significant in victimization by direct aggression (U

= 33376.5, $W = 330982.5$, $p < .001$), in victimization by control ($U = 37741.5$, $W = 335347.5$, $p < .001$), in total victimization ($U = 35284.0$, $W = 332890.0$, $p < .001$), in perpetration by direct aggression ($U = 39836.0$, $W = 337442.0$, $p < .001$), in perpetration by control ($U = 38806.0$, $W = 336412.0$, $p < .001$), and in total perpetration ($U = 38038.0$, $W = 335644.0$, $p < .001$).

Table 3.

Differential comparative analysis of victimization and perpetration factors in relation to substance use

	Group I (N = 771)	Group II (N = 123)	Z	p
	Mean Rank	Mean Rank		
VD	429.29	561.65	- 6.896	< .001
VC	434.95	526.16	- 3.775	< .001
TV	431.76	546.14	- 4.692	< .001
PD	437.67	509.13	- 4.081	< .001
PC	436.33	517.50	- 3.327	< .001
TP	435.34	523.75	- 3.604	< .001

Note. VD: Victimization by Direct Aggression; VC: Victimization by Control; TV: Total Victimization; PD: Perpetration by Direct Aggression; PC: Perpetration by Control; TP: Total Perpetration.

Comparative differential analysis: Cyber dating abuse and relationship length

In order to verify if there were differences regarding cyber dating abuse factors in relation to relationship length, categories were created: less than a year ($n = 155$), from one to three years ($n = 256$) and more than three years ($n = 138$). The results (Table 4) indicated that relationship length had a statistically significant effect on perpetration by control. According to the multiple comparison of mean ranks, the duration of less than a year had a significantly different distribution from the duration of more than three years of dating ($p = .015$).

Table 4

Differential comparative analysis of victimization and perpetration in relation to relationship length

	Less than 1 year	From 1 to 3 years	More than 3 years	χ^2	p
	Mean Rank	Mean Rank	Mean Rank		
VD	280.14	271.81	275.14	.624	.732
VC	259.49	280.22	288.35	4.213	.122
TV	259.17	278.48	286.33	2.551	.279
PD	282.28	270.58	275.03	1.368	.505
PC	248.99	280.96	293.16	6.679	.035
TP	254.07	277.59	293.71	4.888	.087

Note. VD: Victimization by Direct Aggression; VC: Victimization by Control; TV: Total Victimization; PD: Perpetration by Direct Aggression; PC: Perpetration by Control; TP: Total Perpetration.

Discussion and conclusion

Firstly, it is important to mention that it was observed that individuals who were victims of cyber dating abuse (both by direct aggression and by control) also showed perpetration behaviors (both by direct aggression and by control) and vice versa, which points to the existence of mutuality, something already reported in the literature (Caridade & Braga, 2019; Lara, 2020). For example, Borrajo et al. (2015a) observed that about 23% of their sample stated that their partners perpetrated some kind of cyber abuse against them because they had already done it themselves. It was also found that cyber dating abuse factors were positively associated with each other, it being observed that victims of cyber dating abuse by control were simultaneously victims of direct aggression, and that perpetrators of cyber dating abuse by control were simultaneously perpetrators of direct aggression, and vice versa.

Regarding sex, there were statistically significant differences between cyber dating abuse and sex, noting that males had higher scores, both with regard to victimization and with regard to perpetration (it being only significant in terms of direct aggression in the latter one), corroborating the literature only partially. Several studies have reported that males presented higher values than females in terms of victimization

(Durán-Segura & Martínez-Pecino, 2015; García-Sánchez et al., 2017). Moreover, literature shows that, tendentially, females are more prone to perpetrate control behaviors since they seem to be more “obsessive” (Deans & Bhogal, 2019; Stonard et al., 2017).

It is also important to mention that, regarding perpetration, the results may have been significant only in terms of direct aggression since that, according to the literature, control behaviors are less explicit (Caridade & Braga, 2019). Thus, direct aggression behaviors could be less accepted by male participants but, however, this hypothesis is merely speculative.

Regarding substance use, the results corroborated the literature, showing a positive association between all cyber dating abuse factors and substance use, both in terms of victimization and perpetration. The results also suggested that substance use significantly influenced cyber dating abuse, it being observed that participants who used more substances were more victims and more perpetrators of cyber dating abuse, both by direct aggression and by control.

The literature points to the existence of a positive association between offline violence within a love relationship and substance use (Cafferky et al., 2018; Sabina et al., 2017), which is also observed in the meta-analysis of Caridade and Braga (2020), who observed that alcohol and drugs use can contribute to the occurrence of cyber dating abuse.

According to the theoretical framework, offline dating violence and cyber dating abuse are correlated (Borrajó et al., 2015b; Caridade & Braga, 2020; Hinduja & Patchin, 2020) and, therefore, it can be hypothesized that explanations regarding the association between offline violence and substance use can also explain the association between cyber dating abuse and substance use.

Mejía et al. (2019) observed that substance use increases antisocial behavior, and the Directorate-General of Health (2016) also reports that chemical substances have a disinhibiting effect, which may increase violence. Also, Sabina et al. (2017) observed that those who engage in problematic substance use may also be at greater risk of engaging in other risky behaviors that cause vulnerability, which may contribute to them becoming victims.

It is, however, important to bear in mind that the present investigation is a cross-sectional study and that, because of it, it is not possible to infer, for example, whether substance use causes/enhances cyber dating abuse or whether cyber dating abuse causes/enhances substance use. With regard to the latter hypothesis, Mulla et al. (2020) and Sabina et al. (2017) found that being the victim of an abusive relationship can culminate in the use of drugs, and an explanatory hypothesis of this reality may be the fact that substance use can act as a coping mechanism to deal with victimization (Baker, 2016; Parker & Bradshaw, 2015; Sabina et al., 2017). In the same sense, but with regard to cyber dating abuse, according to Lu et al. (2018), substance use can be used as a mechanism to deal with emotions related to a stressor, in this case, to cyber dating abuse.

Finally, regarding the relationship between cyber dating abuse and relationship length, the results revealed the existence of significant differences in perpetration by control, with individuals who had been involved in a longer relationship practicing more acts of control.

According to The Portuguese Association for Victim Support (2011) and regarding offline dating violence, longer relationships provide more favorable contexts to the occurrence of abusive and violent behaviors. In the same sense, Vivolo-Kantor et al. (2016) observed a positive association between relationship length and dating violence perpetration.

As for cyber dating abuse, research is still recent (Caridade et al., 2019) and the literature about its relationship with relationship length is still scarce. In this sense, for example, Van Ouytsel et al. (2018) observed that, in a sample of adolescents, relationship length was positively associated with victimization by control, however, there is literature that points in the sense of no significant associations

between these two variables (Sánchez et al., 2015), thus verifying the need for more research on this topic.

Regarding offline violence, there are several hypotheses that may explain its association with relationship length like, for example, the possible largest number of conflicts associated with the couple's coexistence (The Portuguese Association for Victim Support, 2011), which consequently, can result in higher levels of violence. Also, Rizzo et al. (2020) conjectured that this association can be explained by the increased opportunity for abusive behaviors to take place, as well as by the fear of ending the relationship, which, consequently, increases its length.

The literature demonstrates that there is empirical support in the relationship between cyber dating abuse and offline dating violence (Borrajo et al., 2015b; Caridade & Braga, 2020; Hinduja & Patchin, 2020). Thus, and since that cyber dating abuse is not only associated with offline dating violence but can even be considered as an extension of it (Borrajo et al., 2015b; Caridade et al., 2020a), it may be hypothesized that the explanations above mentioned can also apply to the cyber dating abuse phenomenon.

However, the results were only significant with respect to perpetration by control, which can be explained by the fact that in our sample higher control values were observed (both in terms of victimization and perpetration), which, according to the literature, are often understood as synonyms of love and/or demonstration of jealousy (Caridade & Braga, 2019; Lucero et al., 2014). Thus, its occurrence can be seen as something normative, not culminating in breakups, which consequently leads to an increase of relationship length.

Considering the results obtained, in addition to the theoretical contribution to the literature, it is hoped that the present study may have a preventive role, for example, by raising community awareness, as well as an interventional role, given that interventive programs can become more consistent, and therefore more effective, if they consider the role of several variables related to the cyber dating abuse.

It is important, however, to highlight the limitations of this study, including the fact that it is a cross-sectional investigation, which reinforces the idea that it is not possible to establish causal relationships between the variables studied. Furthermore, and even though the sample is constituted by 894 higher education students, the results cannot be generalized.

In addition, the instruments used are self-reported. Finally, and still regarding the instruments used, DAST only provides information about the participants' involvement with drugs, without specifying which substances are consumed, which does not allow different conclusions to be drawn for each substance.

In the future, it would be important to study which substances are consumed in order to understand how cyber dating abuse could be related to each substance since, for example, according to Neavins et al. (2020) certain substances (e.g. cocaine) appear to be more associated with violence. Future studies may also include the use of alcohol, since, according to the literature, cyber dating victimization is related to the excessive use of this substance (Van Ouytsel et al., 2016).

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