Validation of the digital violence questionnaire (DVQ) in romantic relationships

Validación del Cuestionario de Violencia Digital (Digital Violence Questionnaire, DVQ) en la pareja sentimental

Validação do Questionário sobre Violência Digital (Digital Violence Questionnaire, DVQ) no casal

对亲密伴侣数字暴力问卷的验证

Montero-Fernández, Delia[1] (iD), **García-Rojas, Antonio Daniel[1]** (iD), **Hernando, Ángel[1]** (iD),
Del Río, Francisco Javier[2] (iD)

[1]University of Huelva, Spain.
[2] Institute of Biomedical Research and Innovation of Cádiz (INIBICA). University of Cádiz, Spain.

Abstract

The present article examines digital violence born out of new forms of online communication in romantic relationships. A theoretical review identified the lack of an instrument to measure this type of digital violence, understood as violence exercised through electronic devices commonly used within romantic relationships in the form of control, harassment, abuse and coercion. The aim of the present research was to develop and validate the digital violence questionnaire (DVQ). For this purpose, an expert panel, fieldwork and exploratory factor analysis were used. Two-stage random cluster sampling was carried out at the University of Huelva (Spain) with a sample of 528 students. Following pilot testing and expert panel analysis, an instrument composed of 90 items was developed. This was divided into five blocks of analysis and included additional sociodemographic variables and relational variables pertaining to courtship. Likert scales were used to collect responses with some items being bidirectional in nature. This enabled measurement of perpetration and victimization in relation to this type of violence. Reliability of the questionnaire was supported with a Cronbach's alpha coefficient of 0.945. Following exploratory factor analysis, principal component analysis and varimax rotation, a 7-factor solution and a total of 55 items was obtained. It is concluded that the digital violence questionnaire (DVQ) is a valid and reliable instrument that is suitable for the detection and prevention of digital violence.

Keywords: Digital violence, coercion, romantic relationship, questionnaire, validation.

Resumen

Este artículo estudia la violencia digital nacida con las nuevas formas de comunicación a través de internet en la pareja sentimental. Tras la revisión teórica, se detecta la falta de un instrumento que mida tal violencia digital, entendida como aquella violencia ejercida mediante los dispositivos electrónicos de uso común dentro de la pareja sentimental en forma de control, acoso, abuso y coacción. El objetivo de esta investigación es la construcción y validación del cuestionario de Violencia Digital (en inglés Digital Violence Questionnaire, DVQ). Para ello se han utilizado las técnicas de juicio de personas expertas, trabajo de campo y análisis factorial exploratorio. Se realizó un muestreo bietápico aleatorio por conglomerados en la Universidad de Huelva (España) formado por 528 estudiantes. Tras un pilotaje y un grupo de personas expertas, resultó un instrumento de 90 ítems, subdivididos en cinco bloques de evaluación, además de las variables sociodemográficas y variables relacionales en el noviazgo. El formato de respuesta es de tipo Likert con carácter bidireccional en algunas preguntas, permitiendo medir la perpetración y victimización en la prevalencia de esta violencia. La fiabilidad del cuestionario mediante el coeficiente alfa de Cronbach fue de 0,945. Tras el análisis factorial exploratorio, el análisis de componentes principales y la rotación varimax, se obtuvo una solución factorial de 7 factores y un total de 55 ítems. Se concluye que el cuestionario de Violencia Digital (DVQ), resulta un instrumento válido y fiable, adecuado para la detección y prevención de la violencia digital.

Palabras clave: Violencia digital, coacción, relaciones sentimentales, cuestionario, validación.

Corresponding author / Autor de contacto: Antonio Daniel García Rojas. Faculty of Education, Psychology & Sports Sciences. Campus "El Carmen", Avda. Fuerzas Armadas s/n. 21007- Huelva (Spain). Correo-e: antonio.garcia@dedu.uhu.es

Resumo

Este artigo estuda a violência digital nascida com as novas formas de comunicação através da Internet no casal. Após a revisão teórica, deteta-se a falta de um instrumento para medir essa violência digital, entendida como a violência exercida através dos dispositivos eletrónicos de uso comum no seio do casal sob a forma de controlo, assédio, abuso e coação. O objetivo desta investigação é a construção e validação do Questionário sobre Violência Digital (em inglês Digital Violence Questionnaire, DVQ). Foram utilizadas as técnicas de julgamento por peritos, trabalho de campo e análise fatorial exploratória. Na Universidade de Huelva (Espanha), foi realizada uma amostragem bietápica aleatória por conglomerados, composta por 528 estudantes. Após um teste piloto e um grupo de peritos, o resultado foi um instrumento com 90 itens, subdivididos em cinco blocos de avaliação, para além das variáveis sociodemográficas e variáveis relacionais no namoro. O formato de resposta é do tipo Likert, com caráter bidirecional em algumas perguntas, permitindo medir a perpetração e a vitimização na prevalência desta violência. A fiabilidade do questionário mediante o coeficiente alfa de Cronbach foi de 0,945. Após a análise fatorial exploratória, a análise de componentes principais e a rotação varimax, obteve-se uma solução fatorial de 7 fatores e um total de 55 itens. Conclui-se que o Questionário de Violência Digital (DVQ) é um instrumento válido e fiável, adequado para a deteção e prevenção da violência digital.

Palavras-chave: Violência digital, coação, relações românticas, questionário, validação.

摘要

该文章试图研究亲密伴侣间的数字暴力，这是随着网络新媒体形式而诞生的新型暴力。亲密伴侣间的这种暴力可以理解为通过广泛使用的电子设备对亲密伴侣所进行的控制、骚扰、虐待和胁迫等暴力行径。对研究进行了理论回顾检阅后发现目前缺少一种衡量数字暴力的工具。因此该研究的主要目的是创建并验证数字暴力问卷（英文名称 Digital Violence Questionnaire，缩写为 DVQ）。在研究过程中，我们使用专家评判法、田野调查和探索性因素分析法，对西班牙维尔瓦大学的 528 名学生进行双阶段的随机聚类取样。在试点测试和专家组评判后，得出了一个包含 90 个项目的工具，除社会人口学变量和男女朋友关系变量以外，这些项目被细分在五个评估区块内。问卷回答形式为李克特式，其中有些问题为双向性，这样可以测量数字暴力概率中的施暴和受害行为。通过克隆巴赫系数得到问卷信度为 0.945。在经过探索性因素分析、主成分分析、方差最大旋转后，得到由 7 项因素、55 个项目组成的因素解。研究证明数字暴力问卷（DVQ）是一款能够预防并制止数字暴力的有效和可信的工具。

关键词: 数字暴力、胁迫、亲密伴侣关系、问卷、验证

Introduction

New virtual spaces provide a "meeting place" in which interpersonal relationships are formed around access to content and virtual conversations between peers (Alonso & Raigada, 2014). According to Ramón-Cortés (2010), this technological phenomenon profoundly affects relationships between young people, insofar as digital communication provides the perfect hiding place to express oneself without fully exposing oneself. This also provides the opportunity for digital violence to emerge in romantic relationships.

Starting with the conceptualization of violence, this is explained as a type of interaction between individuals that causes, or threatens to cause, harm or serious subjugation (physical, sexual, verbal or psychological) to an individual or a group, affecting the violated persons in such a way that their present or future potentialities are affected (Galtung, 1995). Digital violence results from the same phenomenon as traditional violence, however digital violence is perpetrated via new information and communication technologies (ICT). Thus, the digital violence referred to in the present paper concerning romantic relationships involves cyberstalking, coercion, intimidation, domination, threats, surveillance and control between members of a romantic couple. It should be noted that, in the study of digital violence, its conceptualization and typology is crucial, as is analysis of the risk factors pertaining to cyber-perpetration and cyber-victimization as a means to understanding it. Jealousy towards one partner

has been presented as one of the main causes behind these controlling behaviours (Rey-Anacona et al., 2014). In addition, relationship duration, maturity and stability influence aggression and abuse in technological spaces (Rodriguez & Rodriguez, 2016). It should be highlighted that in long-distance relationships, social networks have been reported to be used as a means of monitoring one's partner (Billedo et al., 2015). At the same time, it should be highlighted that both boys and girls exercise online aggression and abuse towards their partners (Piquer et al., 2017). In a study by Borrajo et al. (2015) that analysed various forms of control and surveillance of partners via social networks, prevalence of these behaviours among young Spanish adults was reported to be 75% for perpetration and 82% for victimization.

With regards to the prevalence and expression of digital violence analysed in previous studies, a study conducted with an adolescent population should be mentioned. This study found that up to 25% of the sample claimed to have been exposed to abusive partner behaviour through electronic devices (Jaén et al., 2017). One of the most studied manifestations of digital violence is controlling behaviour or surveillance of a partner or ex-partner in digital spaces (Brown and Hegarty, 2018; Leisring & Giumetti, 2014). Other manifestations of digital violence include monitoring and surveillance of a partner (Burke et al., 2011; Lyndon et al., 2011), sending threatening or rude emails and messages (Bennet et al., 2011; Hinduja & Patchin, 2011; Zweig et al., 2013) and posting humiliating photographs (Hinduja & Patchin, 2011; Lyndon et al., 2011). Thus, the concept of digital violence encapsulates definitions that allude to harassment, abuse, coercion and cyber controlling behaviours, indicating that they are essentially the same type of cybercrime despite the use of different terms. With respect to typology or forms of digital violence, different categories have been established. One such study delineated two categories, one related to face-to-face psychological violence based on insults,

threats and the publication of materials that seek to denigrate or threaten the victim and another related to control through electronic devices (Borrajo et al., 2015; Calvete et al., 2019). In contrast, Darvell et al. (2011) distinguish four types of abuse pertaining to digital violence. The first, electronic hostility, deals with the publication or sending of threatening and insulting messages in digital spaces. The second, intrusiveness, refers to control, password manipulation and the creation of false profiles. The third, electronic humiliation, concerns the publication of photos or information to humiliate the victim and, finally, electronic exclusion, concerns the elimination, exclusion or blocking of individuals on social networks.

A growing body of research in the field of digital violence has emerged due to a lack of consensus with diverse terminologies describing such digital violence and the conceptualization of some of its manifestations in the form of cyberstalking or cyberharassment as different phenomena (Dhillon & Smith, 2019; Fissel, 2018; Nobles et al., 2014; Spitzberg, 2017). Thus, there is still an open academic debate around whether digital violence and its manifestations are, in fact, a subset or, perhaps, an extension of traditional violence. In the words of Muñiz & Fonseca (2017), this perspective of digital violence means it is considered, in many cases, a precursor of physical violence and, in others, a reflection of a type of violence that transcends screens. In line with Lucio and Prieto (2014), behaviours of control, abuse and online aggression within romantic relationships constitute an emerging violence facilitated by information and communication technologies (ICTs). Further, previously conducted studies have shown that many young people admit to engaging in these abusive behaviours towards their partners, however, in most cases, these behaviours are not identified as abusive (Muñoz et al., 2011). Consequently, this tolerance, legitimization and normalization of online aggression and abuse allows the practice and reproduction of this violence within the relational dynamics of

the young couple (Borrajo & Gámez, 2015). In accordance with González-Gijón & Soriano-Díaz (2021), present society demands that the youth population be aware of this social issue and be able to identify it. For this reason, the availability of an adequate research instrument is critical in order to be able to detect and measure digital violence and pursue its prevention in the target population. Only a limited number of studies have attempted to classify the different forms of digital violence that an individual can perpetrate or experience (Maran & Begotti, 2019), for instance, cyberstalking or harassment within romantic relationships (Marcum et al., 2017: Smoker & March, 2017; Woodlock, 2017). Thus, due to the aforementioned discrepancies in the way cyberstalking has been operationalized (Wilson et al., 2022), findings are rarely comparable and baseline prevalence rates remain unclear. In this sense, the instrument under examination in the present study is presented as a strategy to measure the existence, typology and prevalence of digital intimate partner violence.

A number of research tools, discussed below, have been designed to independently evaluate different factors of digital violence and violence in romantic relationships. The revised conflict tactic scales (CTS) (Straus et al., 1996) is used to study the degree of physical and psychological violence as it allows conclusions to be drawn regarding the way in which individuals resolve conflict, mutuality, aggression and victimization. The conflict in adolescent dating relationships inventory (CADRI) (Wolfe et al., 2001) provides an instrument for assessing violence in adolescent dating relationships (Wolfe et al., 2001). The Dating Questionnaire (Connolly et al., 2000), adapted for use within the Spanish youth population (Ortega et al., 2008), collects information on aspects of the relationship status of participants. Such aspects include duration, satisfaction and breakup experiences, amongst other issues. The multidimensional measure of emotional abuse by Hoover & Murphy (1999) and psychological abuse by Sackett & Saunders (1999) also explore specific dimensions of violence related to emotional and psychological abuse and harassment behaviours. Likewise, the questionnaire of online abuse in dating (CAON), developed by Borrajo et al. (2015), measures different online abuse behaviours in the context of a romantic relationship, classifying behaviours as psychological violence and control. The dating violence questionnaire (DVQ-R) has been administered to young Colombian and Mexican adult victims and examines violence, including the physical and sexual dimensions of violence, and detachment as factors (Martínez Gómez, et al., 2021).

After reviewing the most relevant scales or questionnaires used nationally and internationally for the analysis of violence through electronic devices in romantic relationships, it can be concluded that a complete and adequate instrument is lacking when it comes to measuring this phenomenon. In other words, an instrument is needed that is capable of measuring this phenomenon from the perspective of both partners given that violence between partners is bidirectional in nature (posing questions to retrieve the first person's point of view and his/her perception of his/her partner's actions). Such a tool should also consider relevant sociodemographic variables and relational variables within the romantic relationship (duration of the relationship, future expectations, frequency of contact, etc.) and analyse digital violence in each case. Thus, the purpose of the present work was to develop and validate the *ad hoc* questionnaire on digital violence, namely, the digital violence questionnaire (DVQ). This instrument measures the violence exercised through commonly used electronic devices within romantic relationships. Unlike the instruments reviewed above, the DVQ is not only an essential tool for the detection of digital violence and all its forms of expression in digital media but, also, for prevention in the field of clinical psychology and education through its application in schools and its exploration of the subject's past romantic relationships.

In consideration of that discussed above and in accordance with the words of the philosopher Byung-Chul Han, "today we do not torture, but "post" and "tweet" (2016), the present work aims to develop an appropriate, valid and reliable research instrument capable of detecting, studying and preventing violence exercised through electronic media within romantic couples. At the same time, in line with the reasoning of Muñiz & Fonseca (2017) and Lucio & Prieto (2014) that these behaviours constitute an emerging violence inherent to ICTs, the present work proposes the hypothesis that violence perpetrated through electronic devices will result in a new form of violence. This form of violence will not be directly related to traditional violence occurring away from screens, since digital violence may manifest itself as an isolated phenomenon in many cases and/or complement traditional violence.

Method

The present article describes the process of construction and validation of a questionnaire designed to determine the level of digital violence prevalent in romantic relationships. In accordance with work conducted by Montero & León (2007), the research methodology is quantitative in nature and employs an instrumental research design. According to Ato et al. (2013), this type of research strives to examine and analyse the psychometric properties of a given instrument.

The qualitative evaluation and selection of preliminary items was carried out by applying the Delphi method. This method employs a structured group communication process that is effective in allowing a group of individuals to come together to deal with a complex problem (Linstone & Turoff, 1975). A group of six experts in the field provided judgements around whether the proposed instrument met pre-established requirements. This enabled the most fruitful and valuable research possible to be carried out. Experts included a lecturer on feminist theory and a doctor on educational psychology from the University of Huelva, a doctor in psychology from the University of Central Lancaster in England, doctor in psychology from Loyola University in Andalusia and two high school teachers with degrees in English Philology with ten years working experience at Deans Community High School in Livingston (Scotland, United Kingdom). Following expert review, it was decided to eliminate some items and change the wording of others in order to improve their comprehension. Subsequently, prior to the start of fieldwork, the questionnaire was piloted with twenty arbitrary university students from the University of Huelva. These students all met inclusion criteria of being in a romantic relationship at the time of study or having been in a romantic relationship in the past. The aim of this was to identify ambiguous questions, possible errors and comprehension conflicts in terms of wording, narration and the presentation of items. No items were modified, added or deleted as a result. A final cleaning of items was then carried out, resulting in the definitive version for use in the field. The DVQ was then, subsequently, validated by the same group of experts.

With regards to the quantitative approach, descriptive and inferential statistical techniques were used to develop and validate all items to be included on the DVQ in consideration of their suitability for the detection, measurement and analysis of the object of study. With regards to the study sample, in order to fulfil the purpose of the present research, it was necessary to collect information on the population of interest. Thus, one unit of sampling was made up by the groups-classes and degrees available within each of the faculties at the University of Huelva. This was done using two-stage random cluster sampling. In the first stage of sampling, a random sample of degrees studied at the University of Huelva was selected and, in the second stage, a random sample of individuals belonging to each group-class within each degree was taken.

With respect to research ethics, it is important to mention the data collection and ethical research procedures followed. Agreement to participate was secured from all

participants prior to data collection. In this sense, a participation information pack was provided that outlined the anonymous nature of the surveys and the general lines of the study in question. Participants were reminded that they were free to leave the study at any time. The aim of this was to make all potential participants aware of their personal contribution and the importance of study participation, as well as to ensure that informed express consent was received, without any confusion or ambiguity. Participants were reminded that the research area deals with a highly sensitive topic, which some participants may find distressing. They were, therefore, requested not to respond or participate in the study should they feel distressed or affected by the topic.

Participants

The present study was conducted at the University of Huelva (Spain). Around 11251 students attended this university during the 2017/2018 academic year. Taking the total student body as the population of interest, a sample of 528 students was required, with a confidence level of 95% and assuming a sampling error of 4.17%. Of this final sample, 69.5% were female (367) and 30.5% were male (160). The mean age was 24.29 years, with a standard deviation of 4.607. With regards to nationality and place of birth, 50.6% of the sample was from Huelva (267). Sample distribution according to province pertained to 25.5% from Seville (124), 6.8% from Cadiz, 1.2% from Granada (6), 1.2% from Malaga (6), 1.3% from Jaen (7), 3.2% from Cordoba (17), 0.8% from the Canary Islands (4), 3. 5% were from Badajoz (18), 0.8% were from Cáceres (4), 1.3% were from Madrid (7), 0.4% were from Valencia (2) and the rest of the sample (0.2%) came from Murcia (1), Zaragoza (1), La Coruña (1), Ávila (1), Oviedo (1), Vizcaya (1) and Toledo (1). The remaining 2% of the sample was of foreign origin, with 1 individual each coming from Brazil, Colombia, Ukraine, Italy, France, Armenia, Ecuador, Venezuela and Western Sahara.

Participating students were undertaking the following studies at the University of Huelva: Double Honours degrees in Translation and Interpretation and Humanities, Sports and Physical Activity Sciences, Industrial Chemical Engineering, Psychology, Primary Education, Early Childhood Education, Social Education, Social Work, Computer Engineering, Industrial Engineering, History, Hispanic Philology, English Studies, English Philology, Double degree in English Studies and Hispanic Philology, Cultural Management, Tourism, Master's degrees in Education, Educommunication and another in an unspecified subject, and a PhD.

Of the total sample (N = 528), 60.6% (229 women and 91 men) reported being in a romantic relationship. Relationship durations were from 0 to 6 months (10.1%), 6 months to 1 year (10.7%), 1 year to 2 years (20.4%), 2 years to 3 years (11%), 3 years to 5 years (22%), 5 years to 10 years (22.3%) and from 10 years onwards (3.5%). With regards to the type of relationship in which participants found themselves, 3.6% reported being in a sporadic relationship, 10.1% described their relationship as being casual in the sense that they were in frequent contact with their partner but would not describe the relationship as being committed, 71.6% were in a serious and/or stable relationship and the final 13.8% stated being in a relationship with a commitment to marriage or cohabitation. Further, 12.7% reported maintaining direct, face-to-face contact with their partner more than once a day, with 28.6% doing so every day, 42.8% reported seeing their partner two or three times a week, 5.3% reported seeing their partner once a week, 4.5% reported seeing their partner once every two weeks and 4.7% reported seeing their partner once a month or less.

With regards to sexual orientation, 5.4% reported being homosexual (10 females and 17 males), 1.6% were bisexual (6 females and 1 male) and 93% were heterosexual (347 females and 142 males). With regards to marital status, 96% indicated that they were single (504), 3% were married (14), 0.5% were

common-law partners (2) and another 0.5% were divorced (2). With regards to family background, 82% reported being raised in a nuclear family (429), 0.7% in an adoptive/foster family (3), 12% in a single-parent family (62), 3% in a reconstituted family (16), 2% in an extended family (10) and only 0.3% in a same-sex parent family (1). The majority of respondents claimed to have a medium socioeconomic status, with 47.3% reporting to be in the upper-middle range (244) and another 49.8% belonging to the lower-middle range (257). The remaining 2.9% of the sample did not respond this question. With regards to the importance of religion to participants, 7.6% considered religion to be very important (40), 15.9% found it to be quite important (84), 50.8% stated that it was not very important (268) and, for 25%, religion was non-existent in their lives (132). A total of 0.7% did not respond to this item.

Instrument

In order to effectively detect and analyse digital violence, the terms used within the questionnaire (DVQ) must be reliable, operational and valid. To this end and in line with that discussed above, digital violence was defined as abuse, harassment, intimidation, control and coercion behaviours exercised using electronic media. The variables included in the questionnaire underpin this definition and create a tool which enable the issue of interest to approached and analysed from different perspectives, according to questionnaire sub-sections. Item operationalisation was conducted in order to transform the concepts and theoretical proposals of interest into variables. At the more abstract end of this process, theoretical concepts were extracted following a review of the state of the issue of digital intimate partner violence. At the less abstract end of the process, the direct empirical referents or indicators were selected for inclusion within each sub-section. The first step consisted of transforming literature-backed theoretical constructs into a pool of items from which five scales were developed on which to base examination of digital violence.

The first part of the DVQ gathers information on sociodemographic and relational variables in courtship, whilst preserving the anonymity of the data. These variables include participant family background, socioeconomic status, religious point of view, educational level of important family figures, number of relationships and duration, sexual orientation, relationship type, frequency of contact and expectations for the future of the relationship. The second part of the questionnaire is made up of five subscales or blocks composed of a total of 90 items. Each of these blocks measures the following dimensions: block 1, consisting of 12 items, assesses perceptions of violence and strategies of control and abuse through electronic devices in romantic relationships between young people; block 2, consisting of 27 items, measures the prevalence of new forms of digital violence in the relationships of young couples; block 3, with 26 items, allows a comparison of the prevalence of online violence with that of violence perpetrated offline; block 4, consisting of 13 items, assesses the tolerance of violence perpetrated using new technologies in young people; block 5, made up of the last 12 items, examines the possible causes and consequences of new forms of digital violence with regards to the relationship itself and those involved in it.

It is also important to comply with certain requisites in order to ensure participants respond to questionnaires appropriately. All sociodemographic and relational data on courtship were gathered using multiple-choice and closed questions. Further, a Likert-type response format was chosen which enabled responses to encapsulate aggressions both suffered and perpetrated. Response options for blocks 1 and 5 were 1 "disagree", 2 "slightly disagree", 3 "slightly agree" and 4 "agree" for blocks 1 and 5, whilst response options were "never", "rarely", "sometimes" and "always" for blocks 2, 3 and 4 of the instrument. Higher or lower scores were given in response to each item depending on the degree of agreement

with the phenomena in question or the frequency of the phenomena. Items were written in the infinitive to enable responses to take one of two perspectives (violence from you towards your partner or your partner towards you, for blocks 2 and 3). This enabled both perpetration and victimization to be measured in the prevalence of violence, in addition to identifying whether aggressions and abuses were bidirectional in nature. The questionnaire is attached as an appendix.

Data analysis

Cronbach's alpha was calculated for the analysis of overall questionnaire reliability, whilst item-total correlations analysed the reliability of individual items. In order to examine factor structure, an exploratory factor analysis was carried out employing principal component extraction and varimax rotation. The assumptions for this analysis were verified beforehand using the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity. Data analysis was carried out using SPSS version 15.

Results

Outcomes corresponding to the sub-section of perceptions of violence and strategies of control and abuse through electronic devices in romantic relationships and the prevalence of new forms of digital violence in the relationships of young couples showed a lack of agreement with the premises related to online control and abuse. Likewise, for all bidirectional items (behaviours regarding one's own actions and those of their partner), a clear tendency was found towards reporting that the partner, in all cases, engaged more frequently in behaviours characteristics of this new (or not) type of digital violence. For example, when asked whether a member of the couple was ever asked to send photos or videos of their whereabouts, the majority response was "never" with 74.6%, in the case of partners, and 81.4%, in the case of the participant themselves. Another finding was that 18.4% ("sometimes") and 17% ("always") of participating students reported that their partners checked the times at which they were connected and disconnected to social media, whilst 20.5% ("sometimes") and 9% ("always) of participants reported engaging in this behaviour themselves. Similarly, with respect to gender in the prevalence of digital violence, no striking differences were observed between males and females. Further, whether one was in a romantic relationship at the time of the study and relationship type had no influence on any measured variable.

Item analysis and reliability

Analysis of the items is based on the 90 preliminary items selected from the expert panel and the pilot test. The mean score and standard deviation pertaining to the DVQ were 206.7348 and 37.85779, respectively. Likewise, following elimination of items with the lowest scores, the corrected item-total correlation was calculated. A total of 55 items were considered by this calculation, with the first 50 of these items producing two values (firstly, a value for actions performed by the respondent's partner towards the respondent [e.g. item 13] and, secondly, the respondent's own actions [e.g. item 13a]). The mean and standard deviation for these items were 80.0493 and 21.40763, respectively.

Table 1. Mean, standard deviation, corrected item-total correlation and Cronbach's alpha when item is removed

Item	Mean	Standard deviation	Correlation element-to-total correlation corrected	Cronbach's alpha if the element is removed
13.	1.97	.942	.577	.944
13. a	1.77	.804	.452	.945
14.	1.99	.990	.554	.944
14. a	1.83	.904	.431	.945
15.	1.71	.914	.560	.944
15. a	1.56	.756	.476	.944
18.	1.69	.867	.586	.944
18. a	1.51	.686	.442	.945
20.	1.26	.654	.526	.944
20. a	1.13	.423	.387	.945
22.	1.51	.782	.556	.944
22. a	1.43	.662	.379	.945
23.	1.24	.597	.497	.944
23. a	1.23	.543	.445	.945
30.	1.19	.529	.505	.944
30. a	1.14	.400	.400	.945
32.	1.33	.787	.400	.945
32. a	1.22	.512	.366	.945
33.	1.28	.643	.648	.944
33. a	1.19	.500	.543	.944
37.	1.66	.902	.546	.944
37. a	1.60	.970	.418	.945
38.	1.48	.767	.584	.944
38. a	1.44	.722	.489	.944
40.	2.02	.852	.452	.945
40. a	2.03	.870	.363	.945
41.	1.86	.922	.634	.943
41. a	1.80	.868	.599	.944
42.	1.38	.755	.632	.944
42. a	1.25	.560	.473	.945
44.	1.19	.567	.512	.944
44. a	1.12	.400	.377	.945
45.	1.24	.587	.553	.944
45. a	1.19	.472	.393	.945
46.	1.24	.616	.632	.944
46. a	1.14	.426	.470	.945
50.	2.03	1.049	.369	.946
50. a	2.06	1.077	.372	.946
51.	1.45	.751	.599	.944
51. a	1.42	.674	.549	.944
52.	1.44	.786	.517	.944
52. a	1.38	.676	.401	.945
54.	1.30	.692	.494	.944
54. a	1.25	.561	.363	.945
55.	1.74	.838	.557	.944
55. a	1.76	.824	.427	.945
57.	1.13	.448	.333	.945
57. a	1.20	.575	.469	.945
58.	1.83	.910	.634	.943
58. a	1.77	.886	.508	.944
67.	1.38	.758	.425	.945
72.	1.19	.519	.465	.945
73.	1.30	.676	.530	.944
78.	1.25	.591	.450	.945
89.	1.19	.498	.349	.945

Notes: (N = 528). The letter "a" next to the number of the items indicates that this response refers to the respondent's own action in their relationship, whilst the absence of the letter "a" indicates the action performed by the respondent's partner towards the respondent.

Scale reliability was estimated using Cronbach's alpha coefficient, producing a value of 0.945. Alpha values greater than or equal to 0.70 are deemed suitable for conducting research (Nunnally & Bernstein 1994). The DVQ has a high internal consistency. Table 2, below, shows the final scores reported by participants, according to sex. The 25th and 75th percentiles are used to establish cut-points for low and high scores, respectively.

Table 2. Final scores reported by participants on the questionnaire, according to sex.

		Female	Male
Means		80.97	77.79
Standard deviation		21.28	21.55
Percentile	1	34.00	35.27
	2	40.68	39.10
	3	53.02	50.47
	4	55.00	53.88
	5	56.00	55.00
	10	58.00	57.00
	15	60.00	59.00
	25	66.00	63.25
	30	68.00	64.30
	35	70.00	66.35
	40	73.00	68.00
	45	75.00	69.45
	50	77.00	71.00
	55	80.00	75.10
	60	84.00	77.00
	65	87.00	80.00
	70	89.90	83.00
	75	94.00	91.00
	80	98.60	96.00
	85	102.00	100.85
	90	110.00	107.90
	95	123.30	118.00
	96	126.32	122.80
	97	128.99	133.02
	98	131.32	141.12
	99	138.98	154.90

Exploratory factor analysis

KMO (0.872) and Bartlett's sphericity (1.4197,470; p < 0.000) tests were performed to verify the adequacy of the factor analysis. Adequacy of the factor analysis was, indeed, verified from the outcomes of these tests. An exploratory factor analysis was performed using principal component analysis and varimax rotation as the method of factor extraction. A 7-factor solution was obtained. Loadings of the items within each of the factors following varimax rotation are shown in Table 2. Loadings equal to or greater than 0.315 were established as the cut-point for item assignment.

Table 3. Rotated component matrix

Item	Component						
	1	**2**	**3**	**4**	**5**	**6**	**7**
13.	.423						
13. a					.480		
14.		.683					
14. a		.665					
15.		.584					
15. a		.625					
18.		.496					
18. a		.476					
20.	.654						
20. a		.315					
22.	.454						
22. a					.715		
23.					.573		
23. a					.654		
30.	.630						
30. a		.474					
32.	.400						
32. a		.511					
33.	.590						
33. a		.461					
37.						.598	
37. a						.662	
38.						.646	
38. a						.672	
40.			.668				
40. a			.492				
41.			.626				
41. a			.582				
42.	.622						
42. a				.389			
44.	.715						
44. a				.538			
45.	.555						
45. a				.549			
46.	.722						
46. a				.569			
50.							.867
50. a							.840
51.			.495				
51. a				.439			
52.				.435			
52. a				.519			
54.	.448						
54. a				.458			
55.			.691				
55. a			.637				
57.					.528		
57. a	.600						
58.			.550				
58. a						.490	
67.			.477				
72.	.483						
73.	.527						
78.	.534						
89.	.326						

Factor 1, denominated "Cyberstalking of one partner by the other", contains items 13, 20, 22, 22, 30, 32, 33, 42, 44, 45, 46, 46, 54, 57a, 72, 73, 78 and 89 from the initial questionnaire. This factor encompasses monitoring, surveillance and controlling actions regarding the partner's activities and social contacts via electronic devices. Factor 2, denominated "Coercive Control", consists of controlling actions such as intimidating and blackmailing the partner. This factor contains items 14, 14a, 15, 15a, 18, 18a, 20a, 30a, 32a, 33 and 67. Factor 3, defined as "Emotional Abuse", involves humiliating and degrading attacks on the partner's self-esteem and contains items 40, 40a, 41, 41a, 51, 55, 55a and 58. Factor 4, designated "Denigration," involves threats and intense verbal aggression and contains items 42a, 44a, 45a, 45a, 46a, 51a, 52, 52a, 54a and 57. Factor 5, designated "First-person cyberstalking," involves the same actions as factor 1 but, in contrast, refers to actions of the respondent towards their partner and contains items 13a, 22a, 23 and 23a. Factor 6, designated "Isolation", involves avoiding the partner during conflict and withholding emotional availability or contact with the partner in a cold or punitive manner. It contains items 37, 37a, 38, 38a and 58. Factor 7, denominated "Domination", is based on manipulation of the partner as a means to influencing decisions around what is believed to be best for the partner and contains items 50 and 50a.

Discussion

Given the lack of an appropriate in-depth tool for examining the phenomenon of digital violence, perpetrated via screens, in romantic relationships, the present study sought to develop and validate a relevant research instrument. Thus, the digital violence questionnaire (DVQ) is presented as a quick, easy and reliable tool for, not only, detecting the digital violence exercised in the digital world within romantic relationships but, also, revealing the aggression, abuse and harassment that goes beyond the actions exercised on the screen. This allows for a global analysis of the violence produced between partners, whilst considering and assessing the bidirectional nature of violence.

As highlighted by the outcomes, a very low prevalence of such digital violence was found in the sample, with a percentage minority of participants responding affirmatively to each individual item. Despite this, the hypothesis put forward in the present study that digital violence constitutes a new form of violence that is independent of off-screen violence can be confirmed. Perusal of the low percentages found for these variables leads to the conclusion that behaviours and attitudes corresponding to abuse, harassment and control via electronic devices give rise to a new form of digital violence. According to the data obtained comparing sub-sections two and three of the questionnaire, the present study demonstrates that digital violence can be exercised in the absence of physical violence. However, in cases in the present sample in which physical and sexual types of violent behaviours were detected, abuse, harassment and control also tended to be perpetrated using electronic devices.

Turning attention back to development of the questionnaire, the proposed tool was initially divided into five sub-sections which measured the following dimensions: block 1, consisting of twelve items, assessed perceptions of violence and strategies of control and abuse enacted using electronic devices in romantic relationships between young people; block 2, consisting of twenty-seven items, measured the prevalence of new forms of digital violence in the relationships of young couples; block 3, with twenty-six items, allowed for a comparison of the prevalence of violence perpetrated via screens and that perpetrated offline, as a function of gender; block 4, consisting of thirteen items, assessed tolerance of this violence in young people when perpetrated via new technologies; block 5, comprising twelve items, examined the possible causes and consequences of new forms of digital violence on the romantic relationship itself and its members. However, as described in the previous section,

exploratory factor analysis of the instrument resulted in seven factors as opposed to the initial five sub-sections considered by the questionnaire. Factor 1 comprised sixteen items and was denominated "Cyberstalking of the Other" (by the respondent's partner towards the respondent). Factor 2 contained eleven items and was named "Coercive Control". Factor 3 comprised eight items and was defined as "Emotional Abuse". Factor 4 was composed of nine items and was denominated "Denigration". Factor 5 contained four items and was called "First-person cyberstalking". Factor 6 contained five items and was designated "Isolation". Finally, factor 7 contained two items and was named "Domination".

Validation of the DVQ involved carrying out the appropriate statistical tests to verify its psychometric characteristics. Firstly, validity was verified via expert panel using the Delphi method, as indicated in the previous sections. In addition, analysis also considered individual items separately, with outcomes verifying that all items met previously established criteria to be considered adequate, according to Ebel (1965). Reliability analysis resulted in a standard Cronbach's alpha of 0.945. The factor analysis performed statistically confirmed the existence of factors conceived based on a theoretical research framework. This enabled complete conceptualization of the digital violence under study. The DVQ was adapted into Spanish and validated. This enables the evaluation of violence exercised on digital media, allowing comparison and discussion in research from other Spanish-speaking countries.

When comparing with some of the instruments reviewed prior to construction of this questionnaire, an instrument developed by Hoover & Murphy (1999) should be mentioned. This measured the construct of emotional abuse in a multidimensional way and is useful because it shares much of the essence of the DVQ, although the factors are described differently. For example, the aforementioned tool includes a "Hostile Withdrawal" factor, which is similar to factor

6 ("Isolation") of the present questionnaire, in that both include items about cutting off communication with the partner out of anger or following an argument. Also, these authors contemplated other factors denominated as "Domination/Intimidation" and "Denigration". These are directly related to factors 4 and 7 of the DVQ, respectively. Similarly, previous work applying the dating violence questionnaire (DVQ-R) to Colombian and Mexican young adult victims developed different factors, among which humiliation and coercion are also found (Martínez Gómez, et al, 2021). This latter research instrument, which analyses physical and sexual violence during dating, omits the overt digital violence that occurs between intimate partners in this population. Further similarities are found between the object of study and the questionnaire of online abuse in dating (CAON) (Borrajo et al. 2015). The latter analyses digital psychological violence and control, however, it should be noted that it fails to include perspectives of violence perpetrated away from screens.

The DVQ, unlike the other reviewed instruments, allows for a more in-depth analysis of digital violence. This is for two reasons. Firstly, because it contemplates more ways and forms of manifestation of digital violence in relation to its seven factors, as previously indicated. As a result, it more accurately measures the prevalence of digital violence within romantic partners. Secondly, this tool enables a more complete examination by uncovering risk factors of cyber-victimization and cyber-perpetration in digital violence as a function of sociodemographic and other relational variables in the romantic relationship, which impact the nature, origin and context of digital violence. This second aspect enables a more comprehensive view of the characteristics of respondents meaning that correlations can be examined to highlight risk factors pertaining to digital violence in the population under investigation. Thus, the DVQ allows exploration of the characteristics and circumstances in which digital violence is displayed within romantic couples for a more

complete understanding. For example, the present study examined whether digital violence correlated with the frequency of contacts made, via electronic media (mobile phone or computer), with the partner as a means to knowing their whereabouts or who they are with. Present findings revealed that almost 60% of participants slightly agreed or agreed (29.7% and 29.9%, respectively) that this took place. Taking a more in-depth look at the present findings, gender was found to influence outcomes. Specifically, more men reported slightly agreeing (33.1%) and more women reported agreeing (34.9%) that this took place. Turning attention to the frequency of direct contact with one's partner, a clear upward trend was seen in slightly agreeing that this took place as the frequency of direct contact decreased.

Thus, as far as application of this research instrument is concerned, the DVQ can assist in the prevention of digital violence in romantic relationships. Outcomes from the DVQ make it possible to conduct a quick and easy assessment of violence in digital spaces between members of romantic relationships. Likewise, as also mentioned above and in consideration of the impact of ICT on social interactions in younger populations and, specifically, on their first interpersonal relationships, the educational context provides a setting in which this tool could be advantageous. Indeed, this tool could be used as a starting point for any educational program for the prevention of violence in young people, given its ability to detect and evaluate individual contexts. Thus, following analysis of the context surrounding a given sample, it would be possible to proceed to the creation of specific training programs on digital violence through discussion, reflection and analysis tailored to the characteristics of the context in which it will be applied. At the same time, clinical psychology would benefit from the use of the DVQ, not only for assessing violence but, also, for educating about the types of everyday situations that could give rise to violence.

With regards to the limitations of the present study, a more in-depth analysis is needed with a representative and randomly selected sample, which would make it possible to eliminate potential sampling biases. For this reason, the present research group intends to administer the questionnaire to a wider sample and repeat the analysis of reliability and validity, this time using confirmatory factor analysis. Further, although the DVQ has been translated into English, further studies could strive to validate the DVQ in its English version so that it can be used in English-speaking countries. Likewise, more information on the factor structure could be studied and extracted.

Following a complex and long process of design and validation, with the successive techniques employed providing a guarantee of rigour, the digital violence questionnaire (DVQ) was shown to be valid and reliable, with the appropriate psychometric properties for use by the research community. Thus, this questionnaire can be used not only as a research instrument in the field of digital romantic violence, using new technologies but, also, for prevention, education and clinical psychology. The validated Spanish version of the DVQ is included as an appendix, alongside its English translation.

References

Acquadro Maran, D., & Begotti, T. (2019). Prevalence of cyberstalking and previous offline victimization in a sample of Italian university students. *Social Sciences*, *8*(1), 30. https://doi.org/10.3390/socsci8010030

Alonso, G. T., & Raigada, J. L. P. (2014). Multitarea, Multipantalla y Práctica social del consumo de Medios entre los jóvenes de 16 a 29 años en España. *María José Arrojo Baliña*, 93.

Ato, M., López, J.J., & Benavente, A. (2013). Un Sistema de clasificación de los diseños de investigación en psicología. *Anales de psicología, 29*(3), 1038-1059. https://doi.org/10.6018/analesps.29.3.178511

Bennett, D. C., Guran, E. L., Ramos, M. C., & Margolin, G. (2011). College students' electronic victimization in friendships and dating relationships: Anticipated distress and associations with risky behaviors. *Violence and Victims*, *26*, 410-429. http://dx.doi.org/10.1891/0886-6708.26.4.410

Billedo, C. J., Kerkhof, P., & Finkenauer, C. (2015). The use of social networking sites for relationship maintenance in long-distance and geographically close romantic relationships. *Cyberpsychology, behavior, and social networking*, *18*(3), 152-157. https://doi.org/10.1089/cyber.2014.0469

Borrajo Mena, E., & Gámez Guadix, M. (2015). Comportamientos, motivos y reacciones asociadas a la victimización del abuso online en el noviazgo: un análisis cualitativo. *Journal of Victimology*. https://doi.org/10.12827/RVJV.2.04

Borrajo, E., Gámez-Guadix, M., Pereda, N., & Calvete, E. (2015). The development and validation of the cyber dating abuse questionnaire among young couples. *Computers in Human Behavior, 48*, 358-365. https://doi.org/10.1016/j.chb.2015.01.063

Brown, C., & Hegarty, K. (2018). Digital dating abuse measures: A critical review. *Aggression and Violent Behavior, 40*, 44-59. https://doi.org/10.1016/j.avb.2018.03.003

Burke, S. C., Wallen, M., Vail-Smith, K., & Knox, D. (2011). Using technology to control intimate partners: An exploratory study of college undergraduates. *Computers in Human Behavior*, *27*, 1162-1167. http://dx.doi.org/10.1016/j.chb.2010.12.010

Calvete, E., Gámez-Guadix, M., & Borrajo, E. (2019). Cyberbullying in Romantic Relationships: Cross-Cultural Issues. In *Cyberbullying in Schools, Workplaces, and Romantic Relationships* (pp. 150-183). Routledge.

Connolly, J., Pepler, D., Craig, W., & Taradash, A. (2000). Dating experiences of bullies in early adolescence. *Child maltreatment, 5*(4), 299-310. https://doi.org/10.1177/1077559500005004002

Darvell, M. J., Walsh, S. P., & White, K. M. (2011). Facebook tells me so: Applying the theory of planned behavior to understand partner-monitoring behavior on Facebook. *Cyberpsychology, Behavior, and Social Networking, 14*, 717-722. https://doi.org/10.1089/cyber.2011.0035

Dhillon, G., & Smith, K. J. (2019). Defining objectives for preventing cyberstalking. *Journal of Business Ethics*, *157*(1), 137-158. http://dx.doi.org/10.1007/s10551-017-3697-x

Ebel, R. L. (1965). Confidence weighting and test reliability. *Journal of Educational Measurement*, *2*(1), 49-57.

Fernández-Fuertes, A. A., Fuertes, A., & Pulido, R. F. (2006). Evaluación de la violencia en las relaciones de pareja de los adolescentes. Validación del Conflict in Adolescent Dating Relationships Inventory (CADRI)-versión española. *International Journal of Clinical and Health Psychology*, *6*(2), 339-358.

Fissel, E. R. (2018). The reporting and help seeking behaviors of cyberstalking victims. *Journal of Interpersonal Violence, 36*(11–12), 1–28. https://doi.org/10.1177/0886260518801942

Galtung, J. (1995). Nonviolence and deep culture: Some hidden obstacles. *Peace Research,* 21-37.

González-Gijón, G., & Soriano-Díaz, A. (2021). Análisis psicométrico de una escala para la detección de la violencia en las relaciones de pareja en jóvenes. *RELIEVE. Revista Electrónica de Investigación y Evaluación Educativa*, *27*(1). http://doi.org/10.30827/relieve.v27i1.21060

Han, B. C. (2016). *Topología de la violencia*. Herder Editorial.

Hinduja, S., & Patchin, J. W. (2011). Cyberbullying fact sheet: Electronic Dating Violence. Cyberbullying Research Center. https://bit.ly/3PoX3aH

Jaén-Cortés, C. I., Rivera-Aragón, S., Reidl-Martínez, L. M., & García-Méndez, M. (2017). Violencia de pareja a través de medios electrónicos en adolescentes mexicanos. *Acta de investigación psicológica*, *7*(1), 2593-

2605. https://doi.org/10.1016/j.aipprr.2017.01.001

Leisring, P. A. & Giumetti, G. W. (2014). Sticks and stones may break my bones, but abusive text messages also hurt: Development and validation of the Cyber Psychological Abuse scale. *Partner Abuse, 5,* 323-341. https://doi.org/10.1891/1946-6560.5.3.323

Linstone, H. A., & Turoff, M. (Eds.). (1975). *The delphi method* (pp. 3-12). Reading, MA: Addison-Wesley.

Lucio-López, L. A., & Prieto-Quezada, M. (2014). Violencia en el ciberespacio en las relaciones de noviazgo adolescente. Un estudio exploratorio en estudiantes mexicanos de escuelas preparatorias. *Revista de educación y desarrollo*, *31*, 61-72.

Lyndon, A., Bonds-Raacke, J., & Cratty, A. D. (2011). College students' Facebook stalking of ex-partners. *Cyberpsychology, Behavior, and Social Networking*, *14*(12), 711-716. https://doi.org/10.1089/cyber.2010.0588

Marcum, C. D., Higgins, G. E., & Nicholson, J. (2017). I'm watching you: Cyberstalking behaviors of university students in romantic relationships. American Journal of Criminal Justice, 42(2), 373–388. https://doi.org/10.1007/s12103-016-9358-2

Martínez Gómez, J. A., Bolívar Suárez, Y., Yanez Peñuñuri, L. Y., & Gaviria Gómez, A. M. (2021). Validación del Cuestionario de Violencia entre Novios (DVQ-R) para víctimas en jóvenes adultos colombianos y mexicanos. *RELIEVE. Revista electrónica de investigación y evaluación educativa*. https://doi.org/10.30827/relieve.v27i2.21963

Montero, I., & León, O. G. (2007). A guide for naming research studies in Psychology. *International Journal of clinical and Health psychology*, *7*(3), 847-862.

Muñiz, J., & Fonseca, E. (2017). Construcción de instrumentos de medida en psicología. *Madrid: FOCAD. Consejo General de Psicología de España*

Muñoz-Rivas, M. J., Grana, J. L., & González, M. P. (2011). Abuso psicológico en parejas jóvenes. *Psicología conductual*, *19*(1), 117.

Murphy, C. M., & Hoover, S. A. (1999). Measuring emotional abuse in dating relationships as a multifactorial construct. *Violence and victims*, *14*(1), 39-53.

Nobles, M., Reyns, B., Fox, K., & Fisher, B. (2014). Protection against pursuit: A conceptual and empirical comparison of cyberstalking and stalking victimization among a national sample. Justice Quarterly, 31(6), 723030. https://doi.org/10.1080/07418825.2012.723030

Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric Theory, 3r ed., McGraw-Hill, New York, NY.

Ortega, R., Rivera, F. J. O., & Sánchez, V. (2008). Violencia sexual entre compañeros y violencia en parejas adolescentes. *International Journal of Psychology and Psychological Therapy, 8*(1), 63-72.

Piquer Barrachina, B., Castro-Calvo, J., & Giménez-García, C. (2017). Violencia de parejas jóvenes a través de internet. Universitat Jaume I http://dx.doi.org/10.6035/AgoraSalut.2017.4.31

Ramón-Cortés, F. (2010). ¿Internet amenaza el contacto real? *El país semanal*, *1736*, 24-25.

Rey-Anacona, C. A., Martínez-Gómez, J. A., Villate-Hernández, L. M., González-Blanco, C. P., & Cárdenas-Vallejo, D. C. (2014). Evaluación preliminar de un programa para parejas no casadas que han presentado malos tratos. *Psychologia. Avances de la disciplina*, *8*(1), 55-66.

Rodríguez Salazar, T., & Rodríguez Morales, Z. (2016). El amor y las nuevas tecnologías: experiencias de comunicación y conflicto. *Comunicación y sociedad*, (25), 15-41.

Sackett, L. A., & Saunders, D. G. (1999). The impact of different forms of psychological abuse on battered women. *Violence and victims*, *14*(1), 105-117. https://doi.org/10.1891/0886-6708.14.1.105

Short, E., Linford, S., Wheatcroft, J. M., & Maple, C. (2014). The impact of cyberstalking: The lived experience-a thematic analysis. *Studies in Health

Technology and Informatics, 199(1), 133–137.

Smoker, M., & March, E. (2017). Predicting perpetration of intimate partner cyberstalking: Gender and the Dark Tetrad. *Computers in Human Behavior*, *72*, 390-396. https://doi.org/10.1016/j.chb.2017.03.012

Spitzberg, B. H. (2017). Acknowledgment of unwanted pursuit, threats, assault, and stalking in a college population. *Psychology of Violence*, *7*(2), 265. https://doi.org/10.1037/a0040205

Straus, M. A., Hamby, S. L., Boney-McCoy, S. U. E., & Sugarman, D. B. (1996). The revised conflict tactics scales (CTS2) development and preliminary psychometric data. *Journal of family issues*, *17*(3), 283-316. https://doi.org/10.1177/0192513960170030

Wilson, C., Sheridan, L., & Garratt-Reed, D. (2022). What is cyberstalking? A review of measurements. *Journal of interpersonal violence*, *37*(11-12), NP9763-NP9783. https://doi.org/10.1177/0886260520985489

Wolfe, D. A., Scott, K., Reitzel-Jaffe, D., Wekerle, C., Grasley, C., & Pittman, A. L. (2001). Development and validation of the conflict in adolescent dating relationships inventory. *Psychological Assessment, 13*(2), 277–293. https://doi.org/10.1177/019251396017003001

Woodlock, D. (2017). The abuse of technology in domestic violence and stalking. *Violence Against Women*, 23(5), 584–602. https://doi.org/10.1177/1077801216646277

Zweig, J. M., Dank, M., Yahner, J., & Lachman, P. (2013). The rate of cyber dating abuse among teens and how it relates to other forms of teen dating violence. *Journal of youth and adolescence*, *42*(7), 1063-1077. https://doi.org/10.1007/s10964-013-9922-8

Authors / Autores
Montero-Fernández, Delia (delia.monterofdz@gmail.com) 🆔 0000-0002-6963-7814   Degree in Early Childhood Education and Degree in Educational Psychology, with an Official Master's Degree in Gender, Identity and Citizenship from the University of Huelva. She is currently a PhD student in the Interdisciplinary Gender Studies program at the same university. Her line of research is the prevention of violence in young affective-sexual relationships and the influence of new technologies and media.
García-Rojas, Antonio Daniel (antonio.garcia@dedu.uhu.es) 🆔 0000-0003-2997-1065   Degree in Psychology and Educational Psychology, PhD from the University of Huelva. Official Master's Degree in Communication and Audiovisual Education and Official Master's Degree in General Health Psychology. Currently Professor and Director of the Department of Pedagogy, as well as Coordinator of the Degree of Social Education of the Faculty of Education, Psychology and Sports Sciences. His research activities are related to sexuality, sex education, gender, emotions, educommunication and gender violence.
Hernando Gómez, Ángel (angel.hernando@dpsi.uhu.es) 🆔 0000-0002-6414-5415   PhD in Psychology from the University of Huelva and Professor in the Department of Social, Developmental and Educational Psychology at the University of Huelva. Associate Editor of the journal Comunicar (Psychology Section). Member of the Research Group AGORA, (HUM-648). He has won several awards for teaching excellence both face-to-face and virtual. His research interests are focused on the prevention of violence in adolescent and youth relationships, intervention on risk behaviors, promotion of positive adolescent development and educommunication. In these lines, he has directed several researches, doctoral theses and intervention programs.
Del Río Olvera, Francisco Javier (franciscojavier.delrio@uca.es) 🆔 0000-0002-9488-7639   Degree in Psychology from the UNED, Master's Degree in Methodology of Behavioral Sciences and Health by the UNED, PhD in Psychology from the University of Almeria. He is currently a PhD student in Applied Multivariate Statistics at the University of Salamanca. Professor at the University of Cadiz, and Tutor at the associated center of the UNED in Cadiz. His research activities are related to addictions, sexuality, and validation of measurement instruments.

RELIEVE

Revista **EL**ectrónica de **I**nvestigación y **EV**aluación **E**ducativa

E-Journal of Educational Research, Assessment and Evaluation

Appendix

Digital Violence Questionnaire (DVQ)

This questionnaire analyses the impact of the inclusion of new technologies in the affective-sexual or intimate relationships among university students. Thus, it is required that the views reflected in the questionnaire are sincere and of a thoughtful nature, since there are no correct or incorrect answers. We will fully guarantee the anonymity and confidentiality in the data processing of the collected information.

Gender: Female ☐ Male ☐ Other ☐	**Date of birth:**
Nationality:	**University where you study:**
Course (degree which you are studying):	**Year of study:**
Prior studies:	**Marital status:**

Type of family (where you live or you lived):
- ☐ Nuclear Family (I live with my two biological parents)
- ☐ Adoptive/Foster Family (I live with foster parents)
- ☐ Single-Parent Family (I live with my mother or with my father)
- ☐ Reconstituted family (I live with my father and his new girlfriend or with my mother and her new boyfriend)
- ☐ Same-Sex Parent Family (I live with my father and his boyfriend or with my mother and her girlfriend)
- ☐ Extended Family (I live with my grandparents, my uncles and aunts, etc.)

Your socioeconomic status:	**Your point of view about religion:**
☐ High	☐ Very important
☐ Upper-middle	☐ Fairly important
☐ Lower-middle	☐ Little importance
☐ Low	☐ No importance

Mark the educational level of your mother (or who was your mother figure):	**Mark the educational level of your father (or who was your father figure):**
☐ Illiterate (She cannot read nor write).	☐ Illiterate (He cannot read nor write).
☐ Educated up to Primary Education level.	☐ Educated up to Primary Education level.
☐ General Certificate of Secondary Education (GCSE).	☐ General Certificate of Secondary Education (GCSE).
☐ Certificate of Higher Education or more.	☐ Certificate of Higher Education or more.

If you have ever been in a dating relationship or been going out with someone, please answer the following questions:

- *About your current relationship status, are you in a dating relationship?*
  - ☐ Yes → *How long have you been dating/going out?:* Years: _____; months: _____
  - ☐ No
- *How many relationships have you had?* (Including your current relationship, if you have one at the moment) _____
- *Longest relationship:* Years: _____; months: _____
- *Shortest relationship:* Years: _____; months: _____

The next few pages ask you to answer questions in relation to your current or recent partner. Please check which person you will be thinking of when you answer these questions:

- ☐ I am thinking of somebody that is my partner right now.
- ☐ I am thinking of a recent ex-partner (within the past 3 months).
- ☐ I am thinking of an ex-partner from within the past year or _____ ago.

Sexual orientation:	How would you describe your relationship?
☐ Homosexual	☐ Sporadic (infrequent)
☐ Heterosexual	☐ Casual stable (frequent but non-committal)
☐ Bisexual	☐ Serious stable
☐ Transexual	☐ Engagement
☐ Other: _____	
Frequency of direct contact with your partner:	**What do you expect about your relationship?**
☐ More than once a day	☐ Marriage or common-law relationship
☐ Every day	☐ Cohabitate or we will stay together
☐ 2-3 times per week	☐ I will break up with my partner
☐ Once per week	☐ My partner will break up with me
☐ Once every two weeks	☐ Other: _____
☐ Once per month or less	

PLEASE, RESPOND HONESTLY BASED ON YOUR CURRENT RELATIONSHIP OR YOUR RECENT RELATIONSHIP

Check the box according to how often you or your partner make the statements below <u>during</u> <u>past month</u> in your current relationship or around a month in your recent relationship, taking into account that:

> **Never (NEV) =** this has never happened in your relationship
> **Seldom (SEL) =** this has happened only 1-2 times in your relationship
> **Sometimes (SOM) =** this has happened about 3-5 times in your relationship
> **Often (OFT) =** this has happened 6 times or more in your relationship

How many times the following happens or has happened in your relationship?	Your partner				Yourself			
	NEV	SEL	SOM	OFT	NEV	SEL	SOM	OFT
1. Asking persistently, "Who are you talking to?"								
2. Checking your partner's connection and disconnection times on social media.								
3. Looking at partner´s online activities at all times on social media (What? Where? Who with?)								
4. Arguing or getting angry if your partner does not immediately reply to your messages and calls.								
5. Suspecting when your partner does not share his/her online activities and interactions.								
6. Reading partner's personal conversations.								
7. Checking secretly your partner´s mobile phone (contacts, conversations) and his/her mobile bill.								
8. Requiring your partner to delete personal things on his/her accounts (status, photos, comments, etc.).								
9. Criticising photos uploaded by your partner on social media.								
10. Accusing your partner of maintaining parallel relationships when you see an interaction between them (photos, messages, comments).								
11. Blocking your partner or not communicating with him/her during an argument or after that.								
12. Insulting your partner through messages when you are having a disagreement or fight.								
13. Taking it out on your partner when something goes wrong.								
14. Blaming your partner for the couple's problems.								
15. Unilaterally imposing prohibitions or rules in the relationship.								
16. Threatening to break up if your partner does not do what you wish.								
17. Criticising or humiliating your partner publicly or privately.								

18. Using threats to control or prevent your partner from doing something.									
19. Trying to decide what is best for the partner, although he/she does not agree.									
20. Blaming your partner for every bad thing that happens in the relationship.									
21. Comparing your partner to other people.									
22. Trying to control what your partner tells other people about the relationship.									
23. Shouting or yelling at your partner.									
24. Obeying your partner for fears that he/she ends the relationship.									
25. Stopping communication with your partner when you are arguing or after an argument.									

Check the box, again, according to how often you make the statements below **during past month** in your **current relationship** or **during a month in your recent relationship**, taking into account that:

> **Never (NEV) =** this has never happened in your relationship
> **Seldom (SEL) =** this has happened only 1-2 times in your relationship
> **Sometimes (SOM) =** this has happened about 3-5 times in your relationship
> **Often (OFT) =** this has happened 6 times or more in your relationship

In my case…	NEV	SEL	SOM	OFT
26. I assume that my partner checks what time I am online or I am not on social media.				
27. I delete photos and comments with my contacts if my partner does not like them.				
28. I stop talking with some people through social media if my partner asks me to.				
29. I tolerate and forgive my partner's insults and threats through messages when we argue.				

Check the box according to your degree of agreement or disagreement about *your relationship*, taking into account that:

> 1 = Disagree
> 2 = Slightly Disagree
> 3 = Slightly Agree
> 4 = Agree

Regarding my relationship, I consider that...				
30. I do not break up with my partner for the fear of feeling lonely.	1	2	3	4