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ORIGINAL ARTICLE

Drug-facilitated sexual assault acceptance scale: construction and validation of a new scale in Spanish context

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Abstract

Aim To construct and validate a scale to measure the degree of acceptance of the population towards drug-facilitated sexual assault.

Subject and methods The drug-facilitated sexual assault acceptance scale was validated in a sample of secondary school students ($n = 485$). For this purpose, the sample was divided into two subsamples ($n_1 = 240$; $n_2 = 245$), and exploratory factor analysis and confirmatory factor analysis were applied to each of them. In addition, the reliability of the developed scale was analyzed using Cronbach's α.

Results In the exploratory factor analysis, a scale of 15 items was obtained, divided into three factors: (a) Sexual Duty, (b) Drunken Effervescence, and (c) Sexual Success. Confirmatory factor analysis confirmed the results. In measuring the reliability of the scale, a Cronbach's α of 0.877 was obtained for the whole sample.

Conclusion These results confirm the adequacy of the scale and its component items, reflecting its suitability for measuring the acceptability of drug-facilitated sexual assaults. Thus, the drug-facilitated sexual assault acceptance scale provides a valid and reliable instrument specifically designed to measure the acceptability of drug-facilitated sexual violence.

Keywords Drug-facilitated sexual assault (DFSA) · Scale · Sexual violence · Spain · Validation

Introduction

Sexual violence is a serious public health problem encompassing unwanted sexual acts, comments, and advances, violating someone's sexual freedom (Krug et al. 2002). Such a specific form of violence has pandemic proportions, particularly affecting women (World Health Organization 2012) and bringing critical consequences on the physical and mental health and well-being of victims and their families, as well as a severe socioeconomic impact (Krug et al. 2002). According to the World Health Organization's updated estimates, at least 6% of women 15 years or older globally experienced sexual violence by someone other than a current or former intimate partner at least once in their lifetime (World Health Organization 2018). Multiple vulnerability factors intersect in sexual violence, generating a wide range of abusive situations.

Multiple vulnerability factors intersect in sexual violence, generating a wide range of abusive situations. Drug-facilitated sexual assault (DFSA) is a specific form of sexual violence through which someone takes non-consensual sexual advantage of a person incapacitated because they are under

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the effects of psychoactive substances voluntarily or involuntarily used (Prego-Meleiro et al. 2020). Numerous studies point to nightlife and party contexts as the main situations where DFSA happens (Anderson et al. 2019; Caballero et al. 2017; Lawyer et al. 2010; Mont et al. 2009; Quintana et al. 2020; Tiemensma and Davies 2018). Such contexts link DFSA to the usual combination in nightlife between a higher predisposition to sexual-affective interaction coupled with increased alcohol and other drug use. Within the European context, social warning and media attention to this specific form of sexual violence has increased significantly throughout recent years (Council of Europe 2022; Olszewski 2009), particularly in Spain, one of the main party destinations, fostered by DFSA casuistry affecting nightlife (Government Delegation against Gender Violence 2015). In this regard, well-targeted awareness and preventive actions require depth contextualized and evidence-based knowledge about social attitudes and sexist perceptions feeding the complex interrelation between sexual-affective intercourse and alcohol and other drug use inside the hegemonic recreational nightlife model. Social psychology's understanding of attitude involves our assessments of virtually every aspect of the social world (Baron and Byrne 2005; Fazio and Roskos-Ewoldsen 1994; Tesser and Martin 1996). In addition, attitude depends on beliefs and thoughts, behaviors or habits, as well as emotions and feelings. Hence, it concerns three major dimensions measuring the cognitive, behavioral, and emotional components that strongly influence our social thinking and actions (Baron and Byrne 2005).

The study of attitudes concerning sexual violence has expanded over the last four decades thanks to the development of an extensive catalog of rape myth acceptance scales (RMAS) (Gerger et al. 2007). At this point, while a myth is a set of schemes or ideas internalized by a significant population percentage as a discourse of authority (Barjola 2018), rape myths more concretely refer to false, stereotypical beliefs about victims, assailants, and sexual assault conditioning social judgment on sexual violence experiences (Saldívar Hernández et al. 2015; Sinko et al. 2020). The scientific study of attitude scales toward sexual violence started in the late 1970s with the Attitudes Toward Rape Scale developed by Field (1978). However, the Rape Myth Acceptance Scale created by Burt (1980) only a few years later notably encouraged such fieldwork. Grounded on these first steps, numerous authors have replicated and adapted Burt's work to different contexts and studied diverse attitudinal components concerning sexual assault (Briere et al. 1985; Costin 1985; Expósito et al. 2014; Janos and Espinosa 2018; Malamuth 1981; Megías et al. 2011; Payne et al. 1999; Quackenbush 1989). The Illinois Rape Myth Acceptance (IRMA), a two-version scale developed by Payne et al. (1999), stands out for its extensive use, along with the Acceptance of Modern Myths About Sexual Aggression (AMMSA), created by Gerger et al. (2007). Likewise, the Illinois Sexual Harassment Myth Acceptance (ISHMA), developed by Lonsway et al. (2008), focuses on sexual harassment, including statements about nightlife-related situations. Concerning attitudes involving sexual-affective interaction under psychoactive substances effects used during nightlife, the Alcohol and Sexual Consent Scale (ASCS) developed by Ward et al. (2012) stands out among the few modest steps taken in that direction: a twelve items scale about sexual victimization on university campuses focusing on alcohol use and sexual habits. When measuring alcohol-mediated attitudes towards sexual consent, the ASCS observed that a more permissive attitude towards accepting sexual consent under the influence of alcohol is associated with a higher level of rape-supportive attitudes (Ward et al. 2012).

Meanwhile, attitudes measurement instruments originally conceived in English-speaking countries are experiencing adaptations to other communities. The AMMSA scale has been tested in English, German, Greek and Spanish versions (Hantzi et al. 2015; Megías et al. 2011; Schlegel and Courtois 2019). As such, recently, Martini et al. (2021) validated in the Italian context an update of the IRMA scale previously published by McMahon and Farmer (2011). Three RMAS have been adapted and implemented in the European-Spanish context. Megías et al. (2011) adapted the AMMSA and applied it to a university student population, including items about sexual assaults in festive settings and alcohol consumption. Similarly, Expósito et al. (2014) adapted and implemented the ISHMA scale in Spanish university students. Furthermore, the Sociological Research Center (Centro de Investigaciones Sociológicas (CIS), in Spanish) studied the sexual violence social perception in a 2017 national sample, including questions targeting beliefs about victims' responsibility related to DFSA situations, such as blaming women sexually assaulted while drunk (Centro de Investigaciones Sociológicas (CIS) 2017). More recently, in the Latin-American Spanish context, Janos and Espinosa developed and applied the Acceptance of Myths about Sexual Violence (AMSV) scale in the Peruvian population (Janos and Espinosa 2018), a step forward for RMAS in Spanish-speaking contexts, although not directly focusing on DFSA or the interrelation between sexual violence and alcohol or other drug use. Consequently, despite steps taken so far, there remains a significant lack of attitude scales specifically focused on the interrelation between drug use and sexual violence during nightlife and DFSA, critical for guiding well-targeted, evidence-based preventive and social awareness efforts. Upon such an instrumental lack, this study hypothesizes that a multidisciplinary team knowledgeable on the DFSA phenomenon and social science methodology can develop a new research tool properly measuring attitudes towards the focused topic. Therefore, this work aims to build and validate a new attitude scale

specifically targeting the complex interrelation between sexual violence and alcohol or other drug use in nightlife and adapted to the Spanish context.

Method

Scale construction

Following the recommendations to apply expert judgment when constructing the instrument (Cabero Almenara and Barroso Osuna 2013), a multidisciplinary team of academics with knowledge and experience in DFSA and social science methodology was formed. The expert team heeded the consensus method as a nominal group technique, with periodic meetings to develop the best possible solutions to the problem to be measured (Manera et al. 2019; Potter et al. 2004). The new instrument design occurred between December 2021 and March 2022, inclusive of both months.

To design an instrument able to measure attitudes, the team of experts drew on the understanding of attitude from social psychology, as well as the extensive catalogue of the rape myth acceptance scales (Burt 1980; Expósito et al. 2014; Feild 1978; Gerger et al. 2007; Hantzi et al. 2015; Megías et al. 2011; Payne et al. 1999). Thus, following the definition of attitude (Baron and Byrne, 2005), the initial structure of the scale consists of three major dimensions, which include items intended to measure: (1) the cognitive component of attitudes (denoted here as "beliefs, thoughts"), (2) the behavioral component ("behaviors, habits") and (3) the emotional component ("emotions and feelings"). Therefore, the scale consisted of 22 items related to beliefs and thoughts (I1–I22), ten items that included behavioral aspects (I23–I32) and nine items linked to the emotional component of attitudes (I33–I41); see Table 1. To see the original Spanish version of the scale, see the Appendix.

For the degree of acceptance measurement, the Likert-type format of values (1 = totally disagree, 7 = totally agree), with an intermediate option (neither agree nor disagree), was used. In all items, the option "no answer" was given to respect the participants' voluntary nature (Bisquerra and Pérez-Escoda 2015; Díaz de Rada 2001; Gilljam and Granberg 1993).

Once the first version of the scale was available, a pretest was carried out in two classrooms of a secondary school ($n = 32$, sex mixed, 14–15 years old), with subsequent discussion with the students to learn in-depth the opinion about the instrument presented by the population under study, the difficulties encountered in understanding the items, the need to modify the language to adapt it to the language used by the sample, etc. Finally, a scale composed of 41 items was constructed (see Table 1).

Participants and procedure

A total of 485 high school students from 10 different schools in the Community of Madrid, Spain (200 male, 254 female, and 31 unknown) participated in this study. Their age ranged from 14 to 19 years ($M = 15.73$; $SD = 0.981$), with an average age of 15.84 years for males ($SD = 1.043$) and 15.62 years for females ($SD = 0.925$).

The total sample was divided into two subsamples (n_1 and n_2) to carry out an exploratory factor analysis on n_1 and a confirmatory factor analysis on n_2. The n_1 subsample comprised 240 students (38.8% male, 56.3% female, and 5.0% unknown). The average age of the n_1 subsample was 15.65 ($SD = 0.747$), with a range of 14–18 years. For males, the average age was 15.82 years ($SD = 0.824$), and for females, 15.52 years ($SD = 0.667$). In the second subsample (n_2), there were 245 students (43.7% male, 48.6% female, 7.8% unknown), and they ranged in age from 14 to 19 years, with an average age of 15.81 ($SD = 1.165$). The average male age was 15.87 years ($SD = 1.204$), and the average female age was 15.74 years ($SD = 1.143$).

To access the survey, they had to read and accept basic information about the study, including the nature of the survey, the average duration, contact information, and voluntary participation. In this way, informed consent of all the participants was obtained. In addition, the ethical aspects of the research were supervised and approved by the Committee of Research Ethics and Animal Experiments of the University of Alcalá (CEIP2022/2/040).

Statistical analysis

For the statistical analysis, IBM SPSS version 25, Factor Analysis 12.03.02, and AMOS™ 22.0 equation modeling software were used. An exploratory factor analysis (EFA) was conducted in the first subsample, using robust unweighted least squares (RULS) as the factor extraction method and varimax rotation as the rotation method. This analysis aims to determine the number of factors underlying the scale and which variables or items of the scale are indicators of what is to be measured (Fernández Aráuz 2015). After the EFA, a confirmatory factor analysis (CFA) was carried out in the second subsample to verify whether the obtained model in EFA had a good fit. Finally, the reliability of the final scale was tested using Cronbach's α coefficient (Cronbach 1951). This coefficient measures the internal consistency of the scale, which indicates the covariance of the items and the presence of the object of study in these items (Oviedo and

Table 1 Items incorporated initially in the scale

I1- I think that, at a party, boys are the ones who usually start flirting more than girls because they are always more eager to flirt than girls.
I2- I think that when flirting increases, it is normal for guys to be very eager to have sex, and that's why they get carried away.
I3- I believe that alcohol can cause a person to lose control and force another person.
I4- I think that when two people are drunk, one can't force the other to have sex.
I5- I think it is necessary to use physical force to assault someone sexually.
I6- I think that when a person goes out partying and drinks alcohol, he/she is more open to having sex.
I7- I think that drinking a lot of alcohol does not make it more difficult to give your consent to have sex.
I8- I believe that when a person drinks alcohol, he/she is not more likely to suffer sexual aggression.
I9- I think that if you sexually arouse another person on, you should finish what you started.
I10- I think I am letting a person know that I want something sexual with her/him when I allow her/him to buy me drinks.
I11- I think that the way of dressing indicates how available a person is sexually speaking.
I12- I think that if something bad happens to you (like a sexual assault) when you are very drunk, you have some responsibility for having drunk so much.
I13- I think that in a sexual assault, even if the victim is drunk, he/she always resists, either physically or verbally.
I14- I think that when you are at a party and two people want to make out, there is no need to talk a lot to make it happen; words are unnecessary.
I15- I think that when you are out partying, it is normal to try several times with the person you like until you get hooked up with him/her.
I16- I think it is easier to get hooked up with someone at a party than on a typical day.
I17- I think if a person goes around saying that he/she has been sexually assaulted while partying but does not report it, it is because he/she has lied.
I18- I think if a person reports having been sexually assaulted at a party months after it happened, it is because he/she is making it up.
I19- I think that to commit sexual assault, you have to be out of your mind; not just anyone can do it.
I20- I believe that most people who sexually assault others during or after a party are strangers to the victim.
I21- I think that when a person wants to abuse another person sexually, he/she usually uses drugs such as *burundanga* or GHB.
I22- I think that when someone suffers a sexual assault while she/he is under the effects of drugs, the most normal thing is that she/he has spiked her/his drink with something.
I23- When I'm partying and want to hook up with someone, I usually buy him/her a drink or a shot, to make the situation easier.
I24- When I hook up with a new person for the first time, it is usually at a party and after drinking alcohol.
I25- My friends and I drink alcohol whenever we go out to parties to establish relationships more easily.
I26- When I am partying, I accept drinks from other people without being sure of their content.
I27- When I am at a party, I let myself be invited to drinks/shots whenever they are offered to me.
I28- When I'm partying and like a person I wait until he/she has drunk a little to hook up with him/her more easily.
I29- I usually take advantage of the drunkenness of the person I'm interested in to hook up with him/her.
I30- When I'm partying, I look for people who have been drinking a lot because it's easier to get hooked up with them.
I31- When I am partying and I see a very drunk person, I don't usually approach to help him/her; he/she will know what he/she is doing.
I32- When we are partying and drinking alcohol, I ignore what others are doing. I do my own thing.
I33- When I am at a party, and a person I am interested in tells me that he/she does not want to have a sexual relationship with me, I feel ashamed.
I34- When I am at a party, and a person I like tells me that he/she does not want to have a sexual relationship with me, I feel indifferent. I don't care.
I35- I have fun when a friend of mine hooks up with drunk people.
I36- I am glad when a friend of mine hooks up with a drunk person at a party.
I37- When I am partying and want to flirt with someone, I feel safer if he/she is drunk.
I38- When I go out partying and drinking alcohol, I feel the need to flirt with other people. I don't care if they are drunk.
I39- When I'm at a party and want to hook up with someone, I prefer that person to be drunk because I'm less embarrassed.
I40- When a person has had too much to drink, I don't empathize with him/her. Whatever happens to him/her that night will be his/her responsibility.
I41- It bothers me that there are people who, when they drink and go out partying, dedicate themselves to flirting, but then they do not get to finish what they have started.

Campo-Arias 2005; Ventura-León 2017; Ventura-León and Caycho-Rodríguez 2017). Cronbach's α proves the scale's capacity to consistently and accurately measure the characteristics it claims to measure (Pérez López 2009).

Results and discussion

Exploratory factor analysis

An exploratory factor analysis (EFA) was carried out on the n_1 subsample ($n_1 = 240$). Different models were tested,

considering two fundamental principles of exploratory factor analysis: (a) the principle of parsimony and (b) the principle of interpretability. According to both principles, the most appropriate factorial solution is the one that adequately explains the phenomenon with the least number of factors, but at the same time, with high interpretability (Díaz de Rada 2018; Méndez Martínez and Rodón Sepúlveda 2012; Pérez López 2009). Following these guidelines, nine different models were analyzed; finally, the three-factor, 15-item solution was chosen. The following variables were eliminated due to low communality (less than 0.3): I1–I8, I10, I13, I15–I17, I19–I23, I25–I27, I31–I34 and I40. The final model is shown in Table 2, with the commonality values obtained for the corresponding items.

Regarding the adequacy of the Pearson correlation matrix, this model obtained a Kaiser–Meyer–Olkin (KMO) value equal to 0.846 (good) and a statistically significant Bartlett's sphericity (chi-square = 992.3; df =105; p-value < 0.001), and the determinant of the matrix was 0.003. Furthermore, the measures of sampling adequacy (MSA) for individual variables were between 0.761 and 0.910, which indicated excellent results. These statistics ensure the adequacy of the model (Lorenzo-Seva and Ferrando 2021). The percentage of variance explained by the model was 55.21%.

In Table 2, the communalities of each item and the results of the rotated loading components are presented after varimax rotation. The first factor (F1) explained 15.63% of the variance, the second (F2) 20.63%, and the third (F3) 11.55%. The absolute values of item loadings indicate the belonging to the factor (the higher the absolute values, the more belonging of the item to the factor). The sign (+/−) points out the direction of the item–factor relationships (Comrey 1985). In Table 2, the elements that belong to a factor are marked in bold. According to the results, the first factor (F1, 15.63% of total variance) is composed of the following items:

I9- I think that if you turn another person on, you should finish what you started.
I11- I think that the way of dressing indicates how available a person is, sexually speaking.

Table 2 Three factor model

	Communality	Rotated loading matrix		
		F1	F2	F3
COGNITIVE COMPONENT OF ATTITUDES				
I9- I think that if you turn another person on, you should finish what you started.	0.476	0.667	−0.066	0.128
I11- I think that the way of dressing indicates how available a person is sexually speaking.	0.390	0.544	0.140	0.031
I12- I think that if something bad happens to you (like a sexual assault) when you are very drunk, you have some responsibility for drinking so much.	0.348	0.604	−0.031	−0.013
I14- I think that when you are at a party and two people want to make out, there is no need to talk a lot to make it happen; words are unnecessary.	0.313	0.195	−0.096	0.531
I18- I think that if a person reports having been sexually assaulted at a party months after it happened, it is because he/she is making it up.	0.696	0.843	−0.088	0.069
BEHAVIORAL COMPONENT				
I24- When I hook up with a new person for the first time, it is usually at a party and after drinking alcohol.	0.420	−0.171	0.644	0.072
I28- When I'm partying and I like a person I wait until he/she has drunk a little to hook up with him/her more easily.	0.513	0.077	0.673	−0.027
I29- I usually take advantage of the drunkenness of the person I'm interested in to hook up with him/her.	0.475	0.101	0.532	0.154
I30- When I'm partying, I look for people who have been drinking a lot because it's easier to get hooked up with them.	0.485	0.048	0.777	−0.168
EMOTIONAL COMPONENT				
I35- I have fun when a friends of mine hooks up with drunk people.	0.552	0.046	−0.036	0.751
I36- I am glad when a friend of mine hooks up with a drunk person at a party.	0.773	−0.027	0.102	0.817
I37- When I am partying and want to flirt with someone, I feel safer if he/she is drunk.	0.456	0.063	0.637	0.018
I38- When I go out partying and I drink alcohol, I feel the need to flirt with other people. I don't care if they are drunk.	0.372	−0.059	0.566	0.091
I39- When I'm at a party and I want to hook up with someone, I prefer that person to be drunk because that way I'm less embarrassed.	0.514	0.049	0.720	−0.035
I41- It bothers me that there are people who, when they drink and go out partying, dedicate themselves to flirting, but then they do not get to finish what they have started.	0.389	0.617	0.065	−0.063

I12- I think that if something bad happens to you (like a sexual assault) when you are very drunk, you have some responsibility for having drunk so much.
I18- I think that if a person reports having been sexually assaulted at a party months after it happened, it is because he/she is making it up.
I41- It bothers me that there are people who, when they drink and go out partying, dedicate themselves to flirting, but then they do not get to finish what they have started.

Because of the items comprising F1 (see Table 2), it was decided to call this factor "Sexual Duty". This factor includes items about how someone is expected to act at nightlife concerning sexual interactions (I9, I11), but also how they are expected to act if they have been a victim of sexual assault (I12, I18, I41). It has been called "Sexual Duty" to highlight the tone of these items of responsibility for one's behavior and, on this basis, how it is the correct thing to behave at nightlife if you want to avoid social sanctions linked to the existence of patriarchal sexual double standards turned up in the main discourse (Bogren et al. 2022; Griffin et al. 2012; Gunby et al. 2020; Hunt et al. 2022).

Regarding the second factor (F2, 20.63% of total variance), it was defined by the following items:

I24- When I hook up with a new person for the first time, it is usually at a party and after drinking alcohol.
I28- When I'm partying, and like a person, I wait until he/she has drunk a little to hook up with him/her more easily.
I29- I usually take advantage of the drunkenness of the person I'm interested in to hook up with him/her.
I30- When I'm partying, I look for people who have been drinking a lot because it's easier to get hooked up with them.
I37- When I am partying and want to flirt with someone, I feel safer if he/she is drunk.
I38- When I go out partying and drinking alcohol, I feel the need to flirt with other people. I don't care if they are drunk.
I39- When I'm at a party and want to hook up with someone, I prefer that person to be drunk because I'm less embarrassed.

The grouping of items in F2 leads researchers to name this factor "Drunken Effervescence", applying the theory of collective effervescence at nightlife based on Durkheim (1995) and developed by Tutenges (2022). According to Tutenges, the collective effervescence at nightlife could be split into different subtypes of effervescence. Among the typology that the author explains, he points out the relevance of drunken effervescence. The alcohol consumption in the party environment induces a sense of euphoria and boldness in those involved, allowing them to engage in more wild and thoughtless behavior. Drunken effervescence allows for breaking behavioral norms, including those related to sexual interactions. Thus, a person is more likely to engage in a sexual relationship when he or she is drunk because, at that moment, they feel invincible. For this reason, it is common that, in nightclubs, some people seek out others who are affected by alcohol with the idea that it is easier to hook up with them if they are already drunk or even pay for other people's drinks to increase their drunkenness (Hunt et al. 2022).

Finally, the following items define the third factor (F3, 11.55% of total variance):

I14- I think that when you are at a party and two people want to make out, there is no need to talk a lot to make it happen; words are unnecessary.
I35- I have fun when a friend hooks up with drunk people.
I36- I am glad when a friend of mine hooks up with a drunk person at a party.

The set of items grouped in the F3 lead to it being named "Sexual Success". The chosen name for the third factor is since, according to the scientific literature (Grazian 2007; Jensen et al. 2019; Jensen and Hunt 2020), partying and having sex at nightlife are understood as collective activities, where success is relevant, not only for the individual but also for the group of friends insofar as individual status and success are transferred to the group. Therefore, it is a "victory" or "success" to be celebrated. Indeed, some authors point out that, especially among men, how they interact when they want to flirt at nightlife could be called "the hunt". This metaphor highlights the collective and predatory search of women that, in some cases, men do at nightlife (Grazian 2007).

Confirmatory factor analysis

In order to evaluate the factorial structure of the model obtained in the exploratory factor analysis, a confirmatory factor analysis was performed considering three first-order dimensions. For this purpose, the second subsample set ($n_2 = 245$) of students was used. The model fit of three correlated latent factors corresponding to the three scales (Sexual Duty, Drunken Effervescence and Sexual Success) was evaluated.

After fitting the three-factor model, the following results were presented: CMIN/DF = 1.261; CFI = 0.980; GFI = 0.950; AGFI = 0.924 and RMSEA = 0.033. The fit index values are >0.9, within the theoretically expected (Bollen 1989; Browne and Cudeck 1993; Byrne 1989; Custers and McNallie 2016; Kaplan 2009; Plaza-Vidal et al. 2020). A significant value of the low chi-square test is presented, which allows CMIN/DF < 2 (Byrne 1989), the root mean square error (RMSEA) is less than 0.05 (Kaplan 2009; Mulaik 2009), which is the recommended value, and the comparative fit index is within the range >0.95 (Geiser et al.

2012; Schermelleh-Engel et al. 2003). These results prove that the model obtained in the EFA was adequately adjusted (Custers and McNallie 2016; Plaza-Vidal et al. 2020).

Figure 1 shows the relationship between the factors (Sexual Duty, Drunken Effervescence and Sexual Success), the scale items in each factor (I9, I11, I12, etc.) and the measurement errors of each of the items (e9, e11, e12, etc.). For a more profound comprehension of Fig. 1, the ovals correspond to the latent variables (the three factors), the rectangles to the observed variables (items) and the circles to the residual error. The lines represent interrelationships among the elements. The direction of the arrows shows the causal relationships between the variables predicted by the model.

Based on these indices, we can state that the model is good and fits empirical data well (Cole and Maxwell 1985). Thus, the results confirm the construct validity and affirm that the model is relevant to ascertain the objectives proposed in this work. Consequently, the 15-item scale grouped into three factors obtained after the exploratory analysis (see Table 2) is confirmed as adequate and valid for studying DFSA attitudes. Next, and as a final point, the scale's reliability will be analyzed.

Reliability analysis

For the reliability analysis, Cronbach's α test is calculated for the whole sample and each subsample used in the factorial and confirmatory analyses. Cronbach's α test is also checked for each sex to observe whether the value of the statistic remains at acceptable values since the scale is considered to have a good internal consistency from 0.700 above (Martín Arribas 2004).

As can be observed in Table 3, a high Cronbach's α value is obtained for the total sample (0.877), a value very similar to that found in subsample n_1 (0.880) and subsample n_2 (0.874). When the reliability is analyzed according to the sex of the respondents, it is observed that, while remaining high, reliability decreases in the case of women. (Cronbach's $\alpha = 0.799$) and increases slightly for men (Cronbach's $\alpha = 0.891$). Furthermore, it can be observed that Cronbach's α, if some item is removed, remains high values, supporting the results for the global Cronbach in each sample analyzed. Given these findings, it can be affirmed that the reliability of the scale obtained after the exploratory and confirmatory factor analysis is high and, therefore, is suitable for the purposes of the research.

Conclusions

The present research objective was to build and validate the new drug-facilitated sexual assault acceptance scale (DFSAAS) in the Spanish context. First, we tested the factor structure to know the latent dimension in which the items were grouped. The results of the exploratory factor analysis (EFA) showed that the best scale model obtained was composed of 15 items divided into three factors (or dimensions): a) Sexual Duty, b) Drunken Effervescence, and c) Sexual Success. The confirmatory factor analysis indicated goodness of fit to the three-factor structure proposed by the EFA. Finally, the reliability analysis (Cronbach's α test) showed high values. These results confirm the adequacy of the scale and its component items, reflecting their suitability for measuring the acceptability of DFSA.

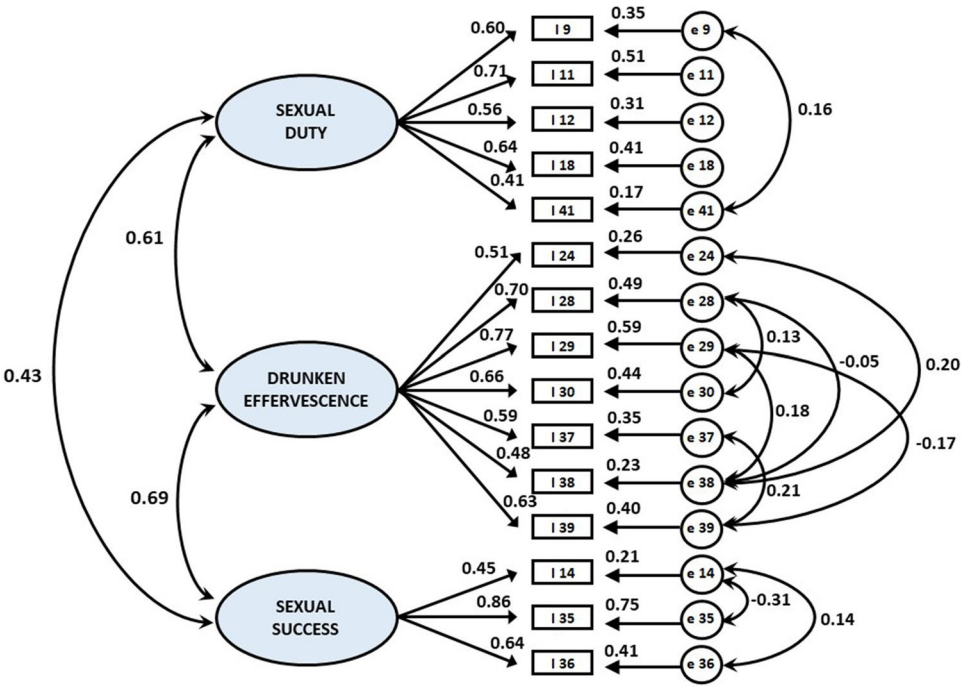

Fig. 1 Confirmatory factor analysis

Table 3 Reliability analysis

	Total Sample	Sample 1 (n_1)	Sample 2 (n_2)	Female	Male
Valid cases	283	146	137	159	106
Cronbach's α	0.877	0.880	0.874	0.799	0.891
Cronbach's α if the item is removed					
I9- I think that if you turn another person on you should finish what you started.	0.870	0.874	0.866	0.796	0.884
I11- I think that the way of dressing is an indicator of how available a person is sexually speaking.	0.867	0.873	0.861	0.800	0.879
I12- I think that if something bad happens to you (like a sexual assault) when you are very drunk you have some responsibility for having drunk so much.	0.877	0.884	0.870	0.804	0.896
I14- I think that when you are at a party and two people want to make out, there is no need to talk a lot to make it happen; words are unnecessary.	0.876	0.875	0.878	0.785	0.890
I18- I think that if a person reports having been sexually assaulted at a party months after it happened, it is because he/she is making it up.	0.871	0.875	0.869	0.801	0.888
I24- When I hook up with a new person for the first time, it is usually at a party and after drinking alcohol.	0.872	0.876	0.868	0.789	0.885
I28- When I'm partying, and I like a person I wait until he/she has drunk a little to hook up with him/her more easily.	0.865	0.867	0.864	0.781	0.880
I29- I usually take advantage of the drunkenness of the person I'm interested in to hook up with him/her.	0.865	0.869	0.861	0.780	0.879
I30- When I'm partying, I look for people who have been drinking a lot because it's easier to get hooked up with them.	0.867	0.871	0.862	0.790	0.881
I35- I have fun when a friends of mine hooks up with drunk people.	0.868	0.870	0.867	0.778	0.885
I36- I am glad when a friend of mine hooks up with a drunk person at a party.	0.869	0.868	0.870	0.777	0.887
I37- When I am partying and want to flirt with someone, I feel safer if he/she is drunk.	0.864	0.867	0.862	0.780	0.879
I38- When I go out partying and I drink alcohol, I feel the need to flirt with other people. I don't care if they are drunk.	0.871	0.873	0.870	0.785	0.882
I39- When I'm at a party and I want to hook up with someone, I prefer that person to be drunk because that way I'm less embarrassed.	0.865	0.869	0.861	0.773	0.882
I41- It bothers me that there are people who, when they drink and go out partying, dedicate themselves to flirting but then they do not get to finish what they have started.	0.872	0.880	0.864	0.794	0.888

The studies comprising the present research also imply certain limitations that deserve mention. Both studies' samples were convenience samples, comprised exclusively of high school students. Applying and validating this scale in new samples of the general population would be a necessary complement to this research. Although this scale was validated in a Spanish context and with a specific population, it is considered of great value due to its uniqueness and specificity. According to the results obtained, the DFSAAS provides a valid and reliable instrument specifically designed to measure acceptance of drug-facilitated sexual violence.

Authors' contributions All authors have participated in conception and design, analysis, and interpretation of the data, drafting the article, revising it critically for important intellectual content and approval of the final version.

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Data Availability The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Code Availability Not applicable.

Declarations

Ethics approval The ethical aspects of the research were supervised and approved by the Committee of Research Ethics and Animal Experiments of the University of Alcalá (CEIP2022/2/040).

Consent to participate *Included in the Ethics Approval.

Consent for publication *Included in the Ethics Approval.

Conflicts of interest The authors have declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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