

## Construction and validation of the Sociosexual Skills Inventory

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### Abstract

The period of youth represents a milestone for sexual transitions, including casual practices. However, having erotic experiences does not presume competence in seeking casual sex (CS), and having a repertoire that is not socially competent for casual sex (CS) can lead to sexual risks. Accordingly, this study constructed and generated evidence of validity for a measure of social skills (SS) related to CS. Initially, 48 items were constructed and applied to a valid sample of 571 heterosexual, cisgender and single young people. Exploratory Factor Analysis was performed, the initial items were reduced to 18 and divided into two factors: Direct Sociosexual Skills, with 11 items ( $\alpha = .81$  and  $\omega = .81$ ), and Indirect Sociosexual Skills, with seven items ( $\alpha = .67$  and  $\omega = .67$ ). This instrument could contribute to the promotion of sexual health, as a more elaborate SS repertoire would be related to lower rates of abuse, sexually transmitted infections and harassment.

**Keywords:** sexuality; sexual behavior; sex; social skills

### Construção e validação do Inventário de Habilidades Sociosexuais

### Resumo

A juventude representa um marco para as transições sexuais, incluindo práticas casuais. Contudo, ter experiências eróticas não presume competência para sua busca, e um repertório pouco competente socialmente para o sexo casual (SC) pode levar a riscos sexuais. Nesse sentido, esse estudo construiu e gerou evidências de validade para uma medida de habilidades sociais (HS) relativas ao SC. Inicialmente, foram construídos 48 itens que foram aplicados a uma amostra válida de 571 jovens heterossexuais, cisgêneros e solteiros. Foi realizada a Análise Fatorial Exploratória, os itens foram reduzidos para 18 e divididos em dois fatores: Habilidades Sociosexuais Diretas, com 11 itens ( $\alpha = 0,81$  e  $\omega = 0,81$ ), e Habilidades Sociosexuais Indiretas, com sete itens ( $\alpha = 0,67$  e  $\omega = 0,67$ ). Este instrumento poderá contribuir para a promoção da saúde sexual, na medida que um repertório mais elaborado de HS estaria relacionado a menores índices de abuso, infecções sexualmente transmissíveis e assédio.

**Palavras-chave:** sexualidade; comportamento sexual; sexo; habilidades sociais

### Construcción y validación del Inventario de Habilidades Sociosexuales

### Resumen

La juventud representa un hito para las transiciones sexuales, incluyendo prácticas casuales. Sin embargo, tener experiencias eróticas no supone competencia para buscarlas, y un repertorio socialmente inadecuado para el sexo casual (SC) puede conducir a riesgos sexuales. En este sentido, este estudio construyó y generó evidencias de validez para una medida de habilidades sociales (HS) relacionadas con el SC. Inicialmente, se crearon 48 ítems que se aplicaron a una muestra válida de 571 jóvenes heterossexuales, cisgénero y solteros. Se realizó un Análisis Factorial Exploratorio y los ítems se redujeron a 18 y se dividieron en dos factores: Habilidades Sociosexuales Directas, con 11 ítems ( $\alpha = 0.81$  y  $\omega = 0.81$ ), y Habilidades Sociosexuales Indirectas, con siete ítems ( $\alpha = 0.67$  y  $\omega = 0.67$ ). Este instrumento podría contribuir a la promoción de la salud sexual, ya que un repertorio de HS más elaborado se asocia con menores índices de abuso, infecciones de transmisión sexual y acoso sexual.

**Palabras clave:** sexualidade; conducta sexual; sexo; habilidades sociales

## Introduction

Casual sex (CS) is everything involved in erotic practices to obtain pleasure outside the context of a romantic relationship (Katz & Schneider, 2013). Therefore, it is understood in the following ways: Sex Without Commitment, which refers to sex between people with little or no involvement where the meeting usually occurs without prior planning; Friends with

Benefits, which consists of friends who practice CS without establishing a relationship, and Casual Sex by Invitation, which is an instant communication, through technological devices, with the purpose of inviting someone for CS (Claxton & van Dulmen, 2013; Wentland & Reissing, 2014).

Several factors influence the realization of CS, such as religiosity (Ahrold et al., 2011), gender, setting (Baranowski & Hecht, 2015), permissiveness,

connection between partners, personal comfort (Katz & Schneider, 2013), seeking sexual sensations and self-esteem (Soster & de Castro, 2018). Regarding gender, even though it is understood that male and female university students with CS experiences are more sexually permissive (Katz & Schneider, 2013), there are differences between genders in the way they will approach casual experiences. Therefore, from a social perspective, depending on gender, the individual will receive different guidelines on how to behave given their sexuality, configuring a sexual double standard (Álvarez-Muelas et al., 2020), in which men receive greater sexual freedom and acceptance of their practices, while women are more objectified, repressed and inhibited about their sexualities (Gómez Berrocal et al., 2019; Kim et al., 2019). However, social bias is not the only aspect that explains the differences in sexual behavior between the sexes, since biology brings contributions that indicate organic markers that impact erotic behavior (Buss & Schmitt, 2018), however, this is not the focus of this study.

Another important factor to be highlighted is the setting, which can be understood through the theory of sexual fields, both physical and virtual, of interaction with sexual intent. These are produced from the desire of those involved. In this sense, people look for places according to their types of desires, after all there is a whole geography of attraction, in which certain places will be more suitable for certain audiences, while there may also be processes of personal adaptation for those who want to frequent certain environments. Accordingly, certain areas are highlighted as conducive to CS, such as bars, college parties, neighborhood clubs, the beach, gym, nightclubs and organized social events (Mendes, 2021; Wade, 2019).

Another important context is the university, which, according to Farvid et al. (2016), has been thoroughly researched when it comes to CS. This is due to the fact that entering the university opens up a range of possibilities for young people and, in this sense, serves as a transition to sexual experiences (Moreira et al., 2018). Young people are increasingly occupying university spaces (Carvalho & Loureiro, 2019) and there is a whole context conducive to CS among young adults due to sexual attitudes, behaviors and feelings relevant to the age group (Piemonte et al., 2019).

The scientific literature highlights a multifactorial character of CS, indicating that an individual's social competence in their interactions will impact their sexuality (Peixoto et al., 2018). Social skills (SS) are

behavioral repertoires necessary for the success of interactions between individuals, involving cultural factors and promoting social competence, which is related to the attribute that evaluates behavior in the midst of socialization (Z. A. P. Del Prette, & Del Prette, 2018). These, in the context highlighted here, promote sexual health, that is, the experience of sexuality in a rewarding way in order to avoid aversive contexts, such as violence, discrimination or the threat of Sexually Transmitted Infections (STIs, Paiva & Caetano, 2020; Peixoto et al., 2018).

In a previous study (Mendes, 2021), two focus groups were created to survey which SS were related to CS. Two groups were formed, one with men and the other with women, which had being heterosexual, cisgender, single, young adults as inclusion criteria and being in a romantic relationship as the exclusion criterion. The results showed that assertiveness, communication skills (verbal and non-verbal), handling conflicts and resolving interpersonal problems, and civility were necessary for a competent approach aimed at CS. It should be noted that the behaviors raised in the study also fit the SS category of expressing affection and intimacy (dating and sex), evidenced in subcategories such as: approaching and showing affection to the other through non-verbal contact, invitations, establishing limits and dealing with intimate and sexual relationships (Mendes, 2021; Z. A. P. Del Prette & Del Prette, 2018).

Although the relationship between sexuality and SS is scientifically known, the findings do not indicate an instrument that measures SS associated with approaches directed towards CS (Paiva & Caetano, 2020). Instruments are evaluative means that have the function of helping to read reality, explaining valid, accurate, reliable and interpretable data (Souza et al., 2017). Some instruments found consider CS or SS in them, at least in some items, as is the case of the Sexual Attitudes Scale by Hendrick and Hendrik (1987), the Stage of Change Scale for Condom Use (Meyer et al., 2003), the Hookup Motives Questionnaire (HMQ, Kenney et al., 2014) and the Sexual Assertiveness Scale (SAS, Morokoff et al., 1997), however, none of them relate the two constructs.

Therefore, the present study aimed to construct an SS measure related to CS and to generate evidence of validity for it. The Sociosexual Skills Inventory (*Inventário de Habilidades Sociossexuais* – IHSS) is an instrument that can be applied both clinically, for evaluating patients undergoing a therapeutic process, and in the academic environment, for use in research, which aims to

measure how competent a subject is to approach the other for specific purposes of CS, under the hypothesis that the more SS a subject has developed, the smaller their repertoire of risks for themselves or others.

## Method

### *Identification of social skills used in the approach directed toward casual sex*

The SS used in the approach targeting CS were identified in a previous study by Mendes (2021), since the scientific literature lacks material on this relationship. For this, two focus groups were carried out, one with eight female participants and one with eight male participants, who fulfilled the following inclusion criteria: being heterosexual, cisgender and single, and the exclusion criterion: being in a romantic relationship. To carry out the meetings, a script of questions was prepared that served as a guide for both groups, the function of which was to be a guide for the subjects discussed, taking as an example the questions: “In these contexts, of the forms of casual sex, how do approaches occur?” or “In what contexts do these approaches occur?”.

The data obtained in the study by Mendes (2021) were transcribed separately and analyzed individually using the IRaMuTeQ software, since this allows the Lexicographic Analysis of textual data, thus generating a dendrogram with the Descending Hierarchical Classification for each gender investigated. The results of the discourses produced in the groups made it possible to study the approaches, locations, influences, inabilities and social skills related to CS.

### *Definition of parameters and Construction of the items*

The parameters for the construction of the instrument were defined based on a previous study by Mendes (2021), in which diverse information was collected through focus groups, such as location, competent behaviors and interpersonal situations involved in the context of casual sex. Therefore, for the construction of the IHSS, it was defined that the items would be composed of 1) the context in which the interpersonal interaction would occur, composed of a place or situation in order to make the reader contextualize with the item; and 2) the socially competent behavior, containing conduct appropriate to the social context. From this, 48 items were constructed and submitted to the next stages of the study, described below. The following constitutes an example of an

item: In a bar, in the middle of a date [context], I invite the person I'm getting involved with to go to a more intimate place [socially competent behavior].

### *Content validation by judges and semantic validation*

The instrument's initial items were submitted to an evaluation by five judges that were experts on the subject, resulting in the choice of the most relevant and representative of the difficulties faced in approaching CS. The judges were PhD holders or doctoral candidates with academic and practical experience in the field of SS and sexuality. All were selected for convenience based on an invitation sent by e-mail. They received a file containing an explanatory text about the proposal and dimensions, as well as the criteria to be evaluated (clarity of language, practical relevance, theoretical relevance and theoretical dimension), a spreadsheet with the instrument items and instructions.

The collected data were analyzed by calculating the Content Validity Coefficient (CVC, Hernández-Nieto, 2002) to assess the degree of agreement regarding the level of clarity, pertinence and relevance of the items, and the Fliess' Kappa Coefficient of inter-rater agreement to measure the agreement regarding the dimension in which the items was classified.

According to Hernandez-Nieto (2002), acceptable CVCs must indicate an agreement of 80% among the evaluators. The IHSS dimensions presented CVCs of 85.00%, 95.00% and 93.33%, respectively. Fliess' Kappa Coefficient obtained for the pertinence dimension was 81.04% (almost perfect, according to Landis & Koch, 1977).

### *Definition and characterization of the sample*

In the convenience sample, 1464 subjects agreed to participate, of whom 571 were valid according to the inclusion and exclusion criteria. Of these 390 (68.3%) were women and 181 (31.7%) men, aged between 18 and 29 years ( $M = 22.8$ ;  $SD = 2.8$ ). The distribution of respondents by Brazilian regions was as follows: 350 (61.3%) from the Southeast region, 134 (23.5%) from the South, 41 (7.2%) from the Central-west, 24 (4.2%) from the Northeast, 18 (3.2%) from the North and 4 (0.7%) residing in other countries. Of these 14 (2.45%) neither studied nor worked, 285 (49.91%) only studied, 74 (12.96%) only worked and 198 (34.68%) studied and worked. Regarding education, 8 (1.40%) were studying or had incomplete high school, 23 (4.03%) had completed high school, 394 (69%) were studying or had incomplete higher education, 107 (18.74 %) had

completed higher education, 20 (3.50%) were studying or had an incomplete Master's degree, 11 (1.93%) had completed a Master's degree, 7 (1.23%) were studying or had an incomplete doctorate and 1 (0.17%), had completed a doctoral degree.

### Instruments

For the participants to evaluate the 48 items of the IHSS, a 5-point Likert-type scale was used: (1) never; (2) a few times; (3) half the time; (4) many times; and (5) always. For the characterization of the sample, the following were included in the sociodemographic questionnaire for data collection: gender, marital status, education and region.

The Enamor Style Inventory (*Inventário de Estilos de Enamoramento* - IEE, Gomes et al., 2016) was also used in an attempt to generate evidence of convergent validity for the IHSS. The IEE is composed of 26 items and two factors, namely the Direct Enamor Style (15 items, Cronbach's Alpha of .85), that is, a direct, objective and clear approach, as described in the item: "At the nightclub, I show with caresses how much I like being with the person", and the Subtle Enamor Style (11 items, Cronbach's Alpha of .87), which covers non-verbal ways of flirting, such as staring or smiling, as in the item: "At a show, when I see a person I desire, I exchange glances with them".

### Data Collection

The research project was submitted and approved by the Ethics Committee of (*information omitted for blind evaluation*). All participants signed the consent form, which included the purpose of the study and the rules that ensure the participant's anonymity and the possibility of withdrawing their consent at any time, as guided by Resolution 466/2012 of the National Health Council on research involving human subjects.

Data collection was carried out through online access to the questionnaire due to the social isolation caused by COVID-19 (Huang et al., 2021). Individuals were invited to participate through social networks and responded through the Google Forms platform.

### Data Analysis

Data were analyzed through Exploratory Factor Analysis (EFA) using the Factor Analysis version 10.10.03 software (Ferrando & Lorenzo-Seva, 2017). To assist in decision-making regarding the number of factors to be extracted, the Optimal implementation of Parallel Analysis (PA) by Timmerman and Lorenzo-Seva (2011) was used. The extraction method employed was the Minimum Rank Factor Analysis (MRFA) (Shapiro & ten Berge, 2002) in a polychoric correlation matrix with Promin rotation (Lorenzo-Seva, 1999). Reliability was verified using Cronbach's Alpha and McDonald's Omega. To generate evidence of convergent validity for the IHSS, the relationships between its dimensions and the IEE were evaluated using Pearson's Correlation Coefficient. Differences between men and women in the scores of the IHSS were also verified through Student's *t*-test for independent samples.

## Results

In the preliminary analyses, two items presented extremely high asymmetry and kurtosis indices, leading to them being excluded from the EFA. The multivariate distribution of the scores of the remaining items was not normal (Mardia's index = 379.21; CR = 8.56;  $p < .001$ ). However, observation of the univariate distribution of the scores revealed that the asymmetry and kurtosis ranged between  $< \pm 2$  and  $< \pm 3$ , respectively, which does not represent an extreme violation of normality (Finney & DeStefano, 2013).

Table 1.

*Parallel Analysis for the Number of Factors Retained*

Variables	Actual Data % variance	Random Mean % variance	Random 95 <sup>th</sup> percentile % variance
1	31.0443	11.2685	12.6844
2	14.1359	10.3412	11.6338
3	9.4920	9.6054	10.6507

Note. 500 Random Polychoric Correlation Matrices. Method for extracting dimensions: Permutation of raw data (Buja & Eyuboglu, 1992).



A series of EFAs were performed using polychoric correlation matrices. After meeting the two-factor recommendation of the parallel analysis (Table 1), 28 items were also excluded because they did not present factor loadings  $\geq .32$  in any factor (2 items) or simultaneous loads  $\geq .32$  in more than one factor (26 items), as indicated by Hair et al. (2018). Bartlett's Test showed  $\chi^2(120) = 2.445.50$ ,  $p < .001$  and the KMO Test = .82, results that revealed the adequacy of the correlation matrix of this sample for factorialization.

A two-factor solution of the EFA for the IHSS, identified as Direct Sociosexual Skills (DSS) and Indirect Sociosexual Skills (ISS) revealed: total variance of 18, total common variance of 11.27, common explained variance of 6.38 (56.6%) and unexplained common variance of 4.89.

The 18 items of the IHSS saturated more in theoretically coherent factors. The assessment of proximity to unidimensionality found evidence of multidimensionality for the scale, thus reinforcing the results of the PA and EFA. In the general evaluation of the current data, the Unidimensional Congruence (UniCo) was .80, the Explained Common Variance (ECV) .71 and the Mean of Item Residual Absolute Loadings (MIREAL) .27. Values that suggest that the data are essentially unidimensional are: UniCo  $> .95$ , ECV  $> .85$  and MIREAL  $< .30$  (Ferrando & Lorenzo-Seva, 2018).

The reliability of the dimensions of the IHSS, represented by the internal consistency and measured by Cronbach's Alpha and McDonald's Omega, presented adequate values for Factor 1. Considering that the instrument is in the development process, the internal consistency values obtained for Factor 2 can be considered acceptable (Table 2).

The correlations between the dimensions of the IHSS and the dimensions of the IEE, analyzed through Pearson's Correlation Coefficient, are shown in Table 3. As expected, statistically significant, positive correlations of moderate magnitudes were found between the dimensions of the IHSS and the IEE.

Comparison of the mean scores of men and women in the dimensions of the IHSS was performed using Student's *t*-test for independent samples. A total of 185 women were randomly chosen to compare with the 181 men, therefore safeguarding the balance in sample sizes. Levene's Test revealed homogeneity of variances for the sample scores. The results revealed significant differences between the groups. The means of the men outperformed those of the women in DSS,

while the means of the women outperformed those of the men in ISS. The effect sizes (*d*) of the gender of the participants in the dimensions of the IHSS ranged from medium to moderately large (Cohen, 1988) see Table 4.

## Discussion

The present study aimed to construct a new measure of SS to approach CS and to generate evidence of validity and reliability for it, since scales with the same specificity were not found in the literature. In the construction process, focus groups and analysis by judges were carried out. In this step, evidence of content validity was produced for the instrument.

Howard (2016) suggested that to retain an item with cross-loading, the following cut-off values should be observed: items with a loading in the primary factor  $> .40$ , can load in an alternative factor with a difference between the two loadings  $> .20$ . In the current study, all items with cross-loadings that were excluded did not fulfill this condition, with the differences between the loadings being smaller than that mentioned. Furthermore, items with factor loadings  $< .32$  have a variance explained by the latent factor of less than 10%, which is a poor representation of it. After excluding items for the above reasons, the EFAs showed evidence of factorial validity for the final version of the IHSS with 18 items divided into two dimensions, namely DSS (11 items) and ISS (seven items).

The unidimensionality proximity assessment (Ferrando & Lorenzo-Seva, 2018) indicated the multidimensionality of the data, reinforcing the extraction of two factors for the IHSS. Internal consistency is generally considered adequate when it is .70 or above. Therefore, the ISS factor was slightly below this cutoff point. However, considering that the instrument is under development, the calculated value is acceptable (DeVellis, 1991; Hair et al., 2018; Streiner, 2003).

The DSS factor is predominantly composed of items with direct and verbal approaches. In this factor, the SS of assertiveness, communication (both verbal and non-verbal) and handling conflicts and resolving interpersonal problems were identified. In the ISS, the items present approaches containing more subtle flirtations and using gestural expressions, in which it was possible to identify the SS of communication (both verbal and non-verbal) and of starting and maintaining friendship. In addition, both factors present the SS of expressing affection and intimacy

Table 2.  
*Matrix of Factor Loadings and Commonalities of IHSS Items*

Items	F1	F2	h2
48. In a bar, in the middle of a date, I invite the person I'm getting involved with to go to a more intimate place.	<b>.81</b>	-.11	.82
39. At a party, when I feel sexual desire for the person I'm exchanging caresses with, I invite them to go to a motel.	<b>.78</b>	-.22	.78
44. At a party, when the conversation with the person I'm getting involved with takes on a sexual connotation, I communicate that I'm sexually interested.	<b>.63</b>	.03	.56
11. At a party, when I feel sexual desire for the person I'm getting involved with, I use approaches such as: "let's go somewhere quieter" to propose casual sex.	<b>.62</b>	-.02	.60
26. In a bar, when I'm in a group including one of my friends with benefits, I make gestures to convey the message of leaving there to have sex.	<b>.62</b>	.09	.56
20. In a bar, after already establishing a relationship with the person, I make clear my sexual desire for the person.	<b>.61</b>	.17	.74
32. During a telephone conversation, when I feel sexually involved with the person with whom I'm building a friendship with benefits, I propose sexual games.	<b>.56</b>	.03	.60
22. In an exchange of text messages, realizing that during the conversation the atmosphere "heated up", I propose trying Sexting (having sex through messages).	<b>.50</b>	.17	.80
46. At home, when I feel like having sex, I send a message to someone I usually have sex with to fulfill my desire.	<b>.50</b>	.13	.51
13. During a party, as a way to initiate an approach, I buy a drink for the person of interest.	<b>.46</b>	-.17	.55
40. At a motel, once the intentions are clear, I compliment my casual partner.	<b>.43</b>	-.02	.46
24. On the Internet, when interacting with someone I'm attracted to, I use "memes" to convey a message that contributes to the flirting.	-.11	<b>.71</b>	.74
18. In a message conversation, I send gifs with double meanings to the person with whom I'm trying to develop a friendship with benefits, in order to make the approach more fun.	.01	<b>.69</b>	.72
5. At a party, when I become interested in someone, I establish eye contact with the intention that my desire is noticed.	-.05	<b>.57</b>	.71
21. In a casual meeting, with the intention of seeking a more relaxed approach, I use expressions known from the media.	.03	<b>.53</b>	.46
23. In the midst of texting, feeling the need to develop greater intimacy with the person I'm sexually attracted to, I strive to maintain the subject.	.02	<b>.48</b>	.58
19. At a party, when I feel attracted to someone, I indicate it by smiling at them.	.05	<b>.47</b>	.61
38. In a club, when attracted to someone, I stay close to them in order to be noticed.	.05	<b>.42</b>	.48
Correlations			
F1	1.00	.35	-
F2	.35	1.00	-
Explained Common Variance	4.0(36%)	2.4(21%)	-
Cronbach's alpha	.81	.67	-
McDonald's omega	.81	.67	-

Note. F1 = Direct Sociosexual Skills. F2 = Indirect Sociosexual Skills.

(dating and sex), as described in Z.A.P. Del Prette and Del Prette (2018).

The first factor, DSS, includes items that suggest an approach more directly aimed at CS, addressing a flirting modality that involves confidence to express interest and clearly convey one's desires. The literature emphasizes that people who manage to interact in this way are more confident, more fluent in conversation and are more likely to have their approaches noticed (Hall & Xing, 2014). Therefore, this flirting is more likely to make the other feel interested (Apostolou & Christoforou, 2020). This flirting will be more competent as it involves SS of assertiveness, communication (both verbal and non-verbal), handling conflicts and resolving interpersonal problems and expressing affection and intimacy (dating and sex) (Z. A. P. Del Prette & Del Prette, 2018).

The assertiveness SS is related to the defense of rights, questioning, giving an opinion, disagreeing, making and refusing requests and other skills that involve being non-aggressive and not passive (Z. A. P. Del Prette & Del Prette, 2018). This dialog directly with the idea of sexual assertiveness, which involves the ability to express desires and ask for and refuse sexual activity (López-Alvarado et al., 2019). A sexually assertive person is a more autonomous, satisfied person with greater chances of achieving their sexual goals in their interactions (Santos-Iglesias et al., 2012). Accordingly, because assertiveness is a skill associated

with extroversion, the literature highlights that more assertive people may be more willing to engage in sexual practices, presenting greater indicators of success when seeking out these acts, including greater chances of having safer sex (Brown & Sacco, 2017; Mercer Kollar et al., 2016; Nettle, 2005). The probability of obtaining greater sexual pleasure in casual encounters is increased, which is associated with positive feelings and greater sexual security (Woerner & Abbey, 2016). It should be noted that greater sexual security is related to a more elaborate repertoire of assertiveness. Therefore, an inventory that assesses assertiveness can predict sexual risk (greater propensity for STIs and unwanted pregnancy) (Davis et al., 2018). In this way, the proposed inventory can evaluate both a more direct and assertive approach in the context of CS as well as a more subtle approach.

Regarding the SS of communication, this is an important element of CS, as it is part of the entire context of sexual approximation, since it goes from the beginning of the interaction, to the realization of the CS and ends when they separate (Beres, 2010). That is, we communicate to get closer to the target person, at the time of sex, exposing preferences and making or refusing requests, and when finishing and saying goodbye. The importance of communication is evident, since the more skillful one is, the greater the probability of obtaining sexual satisfaction, in addition highlighting more involvement (Collins & Horn, 2018), which suggests that it is necessary to be competent to express oneself clearly, so that expectations become understandable. It is also worth mentioning a possible effect of communication, since when it is better expressed in intimacy the possibilities that the casual relationship becomes romantic are greater (Garcia et al., 2018), therefore it is appropriate to be concerned with how to communicate in the casual context so that the desired expectations are properly conveyed.

Table 3.

*Correlation between the dimensions of the IHSS and the IEE*

	DES	SES
Direct SS	.54**	.39**
Indirect SS	.37**	.50**

Note. \*\* $p < .01$

DES: Direct Enamor Style.

SES: Subtle Enamor Style

Table 4.

*Descriptive statistics and Student's t-test for the Sex factor and the dimensions of the IHSS*

Factor	Sex	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t(df)</i>	<i>p</i>	<i>d</i>
Direct SS	Female	185	2.3	0.66	-6.717 (363)	.001	.62
	Male	181	2.8	0.67			
Indirect SS	Female	185	3.9	0.61	3.800 (363)	.001	.47
	Male	181	3.6	0.66			

Furthermore, sexual communication failure can negatively impact sexual practices, being related both to communication SS and to handling conflicts and resolving interpersonal problems. In this way, conflict management and resolution of sexual problems can be approached through sexual communication, with self-disclosure, explaining desire, preferences and sexual attitudes (Mallory et al., 2019). It is emphasized that it is socially competent to recognize, name and define a problem, as well as choose, implement and evaluate each alternative (Z. A. P. Del Prette & Del Prette, 2018), therefore communication failure and other interpersonal problems directed toward sex and looking for alternatives can be managed.

In factor two, related to the indirect form of approaches targeting CS (ISS), the literature shows that subtle and non-verbal approaches are valued (Apostolou & Christoforou, 2020; White et al., 2018), as people have developed indirect ways of courting. This form indicates the communication SS, which are among the SS identified in the items of this factor and, unlike the DSS, the non-verbal style appears in more items than the verbal one. This subtle method is more used by women when compared to the verbal one (Stephens et al., 2017). It is demonstrated by smiles, laughs, eye winks, provocative dances, eye contact, touches and use of the body in a striking way (from flicking the hair, wearing lipstick to having breasts partially exposed) (Tisdale & Sheldon, 2018; White et al., 2018).

The increasing use of technology for sexual dynamics (Barrense-Dias et al., 2017), such as sexting, provides benefits in the approaches to the practices, such as not needing to be in front of the other, thus facilitating flirting, as it is considered more comfortable since it avoids concerns about the way to act, the aesthetics and even allows the construction of more effective messages (Ali & Krish, 2020; Punyanunt-Carter & Wagner, 2018). It should be noted that certain forms of virtual communication, such as through emojis, can be considered substitutes for physical non-verbal communication (Nexø & Strandell, 2020).

Although the IHSS and the IEE (Gomes et al., 2016) do not measure the same construct, as expected, the results showed a positive correlation between the dimensions of the instruments, since both address direct and subtle forms of interpersonal approaches in the context of amorous relationships. Specifically, factor one of the IHSS was related to factor one of the IEE and as factor two of the IHSS was related to factor

two of the IEE. This association indicates that direct enamor styles and more direct approaches towards casual sex are linked, as are more subtle enamor styles and indirect behaviors towards casual sex. In this association, in factor one of both inventories, it is important to highlight the presence of communication SS and the clear and objective way of interacting, that is, both flirting with the intention of falling in love and having CS, have a bias in that clear, direct and assertive verbal communication is used for the due purposes of conquest. In factor two, gestural ways of interacting and flirting are found, such as smiling and maintaining eye contact (Gomes et al., 2016; Tisdale & Sheldon, 2018; White et al., 2018). It is likely that the individual who has a direct approach to CS will also present a direct enamor style, and that those who score higher in an indirect style for CS, will probably have a subtle enamor style.

Although the correlations between the factors of the IHSS and the IEE, both have different proposals and theoretical bases, since the purpose of the IHSS is to investigate the experience of casual sex, which does not necessarily end in a romantic relationship, on the contrary, it is more focused on seeking self-esteem and sensations (Soster & de Castro, 2018), while the IEE highlights the concept of falling in love, which consists of the first affective-sexual attraction and is associated with passionate love and passion (Gomes et al., 2016). Therefore, it is not possible to say that they measure the same object, although they dialogue in the way that flirting presents itself.

With regard to gender, men presented higher scores in factor one, while women did so in factor two. These data are corroborated by the literature through several studies, which report that men commonly tend to be direct in their sexual practices (Stephens et al., 2017) while women tend to have a greater preference and consider indirect, gentle and non-verbal behaviors more appropriate (Apostolou & Christoforou, 2020; White et al., 2018). Another relevant factor is that non-verbal communications in this type of interaction end up functioning as cues emitted by women to men, such as a smile for example (Tisdale & Sheldon, 2018). Again, in this study, the IHSS adequately identified these theoretically expected differences between females and males.

In conclusion, the present study aimed to construct and validate an instrument that measures how socially skilled an individual is in their approach to CS. The analyses showed the validity of the instrument,



and the IHSS can be considered a valid measurement instrument for research and the clinical practice, since it evaluates the styles of approaches aimed at CS. In addition, it fills a gap, since there are still no validated instruments in this area. Therefore, the IHSS provides a measure for sexual styles, contributing to assess how skilled a young adult can be to approach someone for this purpose. This help to reduce the risk of sexually transmitted infections, abuse and harassment, since a socially competent person is less likely to sexually assault (Carvalho & Sá, 2017) and more likely to have better sexual health (Paiva & Caetano, 2020; Peixoto et al., 2018).

In this study, some evidence of validity and reliability for the IHSS was generated. This instrument may contribute to the promotion of sexual health, both in research and in clinical psychology. However, for greater consistency and refinement, future studies should focus on improving the instrument, confirming the factorial structure and temporal stability. Although the results indicated evidence of validity and reliability for the IHSS, the sample used consisted mostly of women, suggesting that future studies apply the instrument with a more equally distributed male and female sample. Another limitation found was the lack of scientific literature on the subject, which despite indicating a pioneering spirit for the present study, implies less articulation with literature that specifically addresses the relationship between SS and CS. Therefore, future researchers can both study this relationship and expand the studies of the IHSS itself, evaluating its applicability to people of other sexual orientations and who are not cisgender.

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