

# Validation of Sexual Videos: Sexual Arousal, Emotional Responses, and Perceptions of the Female Actress

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**VALIDATION OF SEXUAL VIDEOS:  
SEXUAL AROUSAL, EMOTIONAL RESPONSES, AND PERCEPTIONS OF THE  
FEMALE ACTRESS**

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## RESUMO

Esta tese investiga como homens heterossexuais respondem ao conteúdo sexual explícito audiovisual. Dada a escassez de estudos de validação e dados desatualizados sobre como os homens percebem emoções e pistas sexuais de parceiras do sexo oposto, esta pesquisa assume importância significativa.

Uma amostra de 50 homens heterossexuais portugueses foi exposta a três filmes sexualmente explícitos, exibindo pistas de envolvimento, ambiguidade e sofrimento. Os participantes forneceram dados sobre as suas respostas emocionais e sexuais, bem como sobre as suas percepções de excitação e emoções da atriz, a sua atratividade, imersão e familiaridade com práticas *kink*.

Os resultados mostraram que o vídeo de sofrimento provocou menor excitação sexual e mais emoções negativas, incluindo afeto negativo elevado. Além disso, a atriz foi percebida com pouca excitação e prazer, consentimento e querer a relação reduzidos. Finalmente, nesta condição, atribuíram mais emoções negativas e menos felicidade à atriz. O oposto aconteceu para a cena de envolvimento. O estímulo ambíguo foi geralmente percebido como mais negativo que positivo. Por último, foram exploradas se algumas diferenças individuais se correlacionaram com as respostas emocionais e sexuais, e as percepções dos participantes.

Este estudo reforça descobertas anteriores sobre excitação sexual e respostas emocionais em cenários consensuais e não consensuais, estendendo esse conhecimento ao fornecer a percepção dos homens sobre a atriz. Além disso, as descobertas destacam a complexidade de criar conteúdo sexual verdadeiramente ambíguo. Esse conhecimento pode orientar futuras investigações no desenvolvimento de metodologias experimentais rigorosas e contribuir para uma compreensão mais abrangente das respostas sexuais a vídeos.

*Palavras-chave:* estudo de validação; vídeos sexuais audiovisuais; respostas masculinas

## ABSTRACT

This thesis investigates how heterosexual men respond to explicit audiovisual sexual content. Given the scarcity of validation studies, and outdated data on how men perceive emotions and sexual cues of opposite sex partners, this research assumes significant importance.

A sample of 50 portuguese heterosexual men was exposed to three sexually explicit films, each featuring the actress displaying engagement, ambiguous, or distress cues. Participants provided data on their emotional and sexual responses, as well as their perceptions of the actress's arousal and emotions, her attractiveness, immersion and familiarity with kink practices.

Findings showed that the distress video elicited lower sexual arousal and more negative emotions, including heightened negative affect. Additionally, the actress was perceived with reduced arousal, pleasure, consent and wantness. Finally, also in this condition, they attributed more negative emotions and less happiness to the actress. The opposite was observed for the engagement scene. The ambiguous stimulus was generally perceived as more negative than positive. Lastly, it was explored how some individual differences correlated with participants' emotional and sexual responses, and perceptions.

This study reinforces prior research findings regarding sexual arousal and emotional responses to consensual and non-consensual scenarios, extending this knowledge by providing men's perception of the actress. Moreover, the findings underscore the complexity of creating genuinely ambiguous sexual content. This knowledge can guide future research in the development of more rigorous experimental methodologies and contribute to a more comprehensive understanding of sexual responses to videos.

*Keywords:* validation study; audiovisual sexual videos; men's responses

## RESUMEN

Este trabajo investiga cómo los hombres heterosexuales responden al contenido sexual explícito audiovisual. Dada la escasez de estudios de validación y datos desactualizados sobre cómo los hombres perciben las emociones y pistas sexuales de parejas del sexo opuesto, esta investigación adquiere gran relevancia.

Una muestra de 50 hombres heterosexuales portugueses fue expuesta a tres películas sexualmente explícitas, con la actriz mostrando pistas de compromiso, ambigüedad o sufrimiento. Los participantes proporcionaron datos sobre sus respuestas emocionales y sexuales, así como sus percepciones sobre la excitación y las emociones de la actriz, su atractivo, inmersión y familiaridad con prácticas de *kink*.

Los resultados mostraron que el video de sufrimiento provocó una menor excitación sexual y más emociones negativas, incluyendo un mayor afecto negativo. La actriz fue percibida con menos excitación, placer, consentimiento y deseo del acto. En esta condición, se le atribuyeron más emociones negativas y menos felicidad. Lo contrario ocurrió para la escena de compromiso. El estímulo ambiguo se percibió generalmente como más negativo que positivo. Por último, fue explorado cómo algunas diferencias individuales se correlacionaron con las respuestas emocionales y sexuales, y las percepciones de los participantes.

Esta investigación refuerza resultados previos sobre excitación sexual y respuestas emocionales en escenarios consensuales y no consensuales, ampliando este conocimiento al proporcionar la percepción de los hombres sobre la actriz. Además, destaca la complejidad de crear contenido sexual verdaderamente ambiguo. Este conocimiento puede guiar futuras investigaciones en el desarrollo de metodologías experimentales rigurosas y en la comprensión más completa de respuestas sexuales a videos.

*Palabras clave:* estudio de validación; videos sexuales audiovisuales; respuestas masculinas

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# 1. INTRODUCTION

## 1.1. The study of sex in the laboratory

The study of sexual behaviour within laboratory settings has long been of interest to researchers in the field of sexology. The controlled environment of a laboratory allows for a rigorous study of social behaviour, as it can isolate and systematically vary the specific unpredictable factors in the natural social environment (Noel et al., 2008). However, when studying sexual aggression, a complex and socially censored phenomenon, challenges arise when transferred from real-life contexts to the laboratory (Noel et al., 2008).

Therefore, research laboratories must prioritize the improvement of methods and the application of new tools that accommodate the specific needs of sexology research (Carvalho, 2022). There is a need to understand if the behaviour observed in the laboratory accurately represents the behaviour in a natural environment. This concern emphasizes the importance of methods that include experimental conditions that are as close to reality as possible. In the study of sexual aggression, the most used method is the presentation of (sexual violence) scenarios.

In past studies targeting the response to sexual contents, it was usual for the participant to read a brief description of a sexual situation and then, answer a series of questions (e.g. Malamuth et al., 1988; Malamuth et al., 1980), including questions on emotions, attributions or sexual arousal. Technological advances have introduced the use of audio-recorded narratives (e.g. Bernat et al., 1999; Lohr et al., 1997; Malamuth & Check, 1983) or video/slide images (e.g. Bernat et al., 1999; Linz et al., 1989; Miner et al., 1995; Noel et al., 2008; Schmidt, 1975). These scenarios may display consensual or non-consensual sex, or even not sexual scenes, in which characters can be naked, semi-naked or dressed (Murphy et al., 2019). Therefore, fictional scenarios can take a wide range of possibilities, and almost all the studies implemented different sets of narratives, making cross-study comparisons challenging (Miner et al., 1995). Additionally, besides the lack of standardization of techniques in sex research, validation studies rarely happen (Carvalho, 2022). In fact, only one study found aimed to validate sex scenarios (Noel et al., 2008). Researchers often remove excerpts of sex videos from existing pornography to use as stimuli, leading to a lack of control over the

cues and potential distractions. These distractions inevitably interfere with the participants' perceptions and, thus, interfere with their answers to the stimulus. Limitations like these can influence how the results can be used in future investigations (Carvalho, 2022).

Considering such needs, the current study aims to address these limitations by creating controlled stimuli, focusing on sexual engagement, ambiguous and distress cues portrayed by the actress. Also, it seeks to investigate how men perceive the different cues and the actress.

## **1.2. Participants' sexual and emotional responses, and perception of the characters' stimuli**

Interest in the relationship between sexual arousal and sexual aggression has increased exponentially during the last three decades of the last century. Several studies contributed to the understanding of this relationship, especially in male convicted sex offenders. The results, in general, showed that the participants representing the general population, compared to the sex offenders, showed less sexual arousal when presented with coercive sexual stimuli (e.g. Abel et al., 1977).

Nevertheless, it is difficult to study sex offenders in the laboratory. It is also important to study the phenomenon in the general population, as university students often represent a valuable comparison group (e.g. Bernat et al., 1999; Lohr et al., 1997). In this sense, students without a sexually aggressive past showed a decrease in arousal at the onset of violent actions (Bernat et al., 1999).

In fact, extensive knowledge exists regarding the relationship between sexual arousal and the exposure of aggressive sexual materials within the general male population. In a previous study with subjects considered normative, separated into two groups - one with participants who read stories with rape and the other with participants who read stories without it -, participants who read the non-rape stories reported more sexual arousal than those who read the rape versions (Malamuth et al., 1980). This means that the first individuals reported being more aroused by consensual stimuli, than the latter with non-consensual stimuli. Corroborating these results, laboratory studies that measured genital responses, indicated that most men respond more sexually to consensual sexual narratives than non-consensual ones (Fairweather et al., 2016),

especially when the woman demonstrates experiencing disgust (Malamuth & Check, 1983). In some studies, with male and female participants, both genders reported being less sexually attracted to non-consensual scenes, comparatively to consensual ones (Malamuth et al., 1986). In addition, the cues that indicate lack of consent, such as refusal, fear, and pain experienced by the woman, and strength on the part of the man, do not appear to be exciting (Fairweather et al., 2016). Despite this being so, aggression does not necessarily inhibit sexual arousal (Malamuth et al., 1986). That is, despite viewing the videos that showed sexually coercive situations, both genders demonstrated some sexual arousal.

Emotional responses to sexually coercive stimuli were also studied in men. When presented with a simulation of rape, men experienced a pattern of emotions (interest, disgust, and surprise) that is different from the responses elicited by consensual sex (Sirkin & Mosher, 1985, as cited in Mosher & Anderson, 1986). The depiction of a sexual coercive scene evoked a mild to moderate level of negative affect (Mosher & Anderson, 1986). More recently, authors have suggested that subjects' emotional responses to rape may result in sexual inhibition, because the participant may become fearful or anxious in response to descriptions of a violent and criminal act, or he may respond with an emotional reaction to the victim's description of harm and upset (Barbaree & Marshall, 1991).

Finally, regarding the perceptions of the actress in the sexual material, in a previous laboratory study, female characters in aggressive sexual scenarios were perceived as less willing and experiencing less pleasure and more pain than the female characters in non-aggressive stimuli (Malamuth et al., 1986). On the opposite, women in consensual intercourse were perceived as willing participants with no pain experience (Malamuth et al., 1986). Evaluations of mood, pleasure, and pain indicated that victimized character was perceived less favorably in non-consensual stories than in consensual ones (Check & Malamuth, 1983).

However, there is little in the literature on the participants' perception of emotions of the characters, so generalizations are not possible. Therefore, further research on the topic is needed.

Besides that, present era is marked by the influence of culture and the media on sexual socialization, as the conventional agents do not provide much (or when doing, provide contradictory) information about sexuality (Brown & L'Engle, 2009; Scull & Malik, 2019). The proliferation of media content available for consumption, the

pervasiveness of media in daily life (Scull & Malik, 2019) and the increase in film productions of violent sex (Brown & L'Engle, 2009; Linz et al., 1989) may have desensitized individuals or made them simply unconcerned with female victims of violence (Donnerstein et al., 1987, as cited in Linz et al., 1989; Linz et al., 1988).

If the culture influences the way individuals perceive sexual stimuli and aggression, participants may not identify sexual aggression in those scenarios, and thus, their reaction in the laboratory may not be compatible with their real reaction (Noel et al., 2008). Stories, therefore, need to be as realistic as possible and suitable for the population that is being studied (Noel et al., 2008).

### **1.3. Relevance and importance of this study**

The goal of this study is to assess the efficacy of a set of three sexually explicit films, portraying sexual engagement, ambiguous, and distress cues exhibited by the actress. Therefore, this validation holds significant relevance for two reasons.

Firstly, it contributes to the already existing investigation of sexual aggression perception by offering specific scenarios that depict recognizable sexual situations. The scenarios include one video where a woman is depicted as actively engaged in a sexual act, one where her cues of enjoyment or consent are ambiguous, and one where she exhibits signs of distress.

Moreover, the investigation about visual sexual stimuli is considerably dated. Thus, there is a need to conduct up-to-date experimental research concerning the emotions and perceptions of individuals towards sexual clips. In this context, this thesis strives to offer insights into how individuals evaluate and respond to sexual content of different sexual videos.

### **1.4. Research questions and hypothesis**

According to the literature and the focus of this study, the following two research questions and consequent hypothesis emerged:

**a. How do heterosexual men respond to sexual videos, including engagement, ambiguous, and distress cues?**

*Participants sexual arousal:* During the visualization of the video with distress sexual cues, participants will report less sexual arousal than during the engagement video.

*Participants emotional arousal:* During the visualization of the video with distress sexual cues, participants will report more negative emotional valence than during the engagement video.

*Participants Positive and Negative Affect Scale (PANAS):* During the visualization of the video with distress sexual cues, participants will have significantly lower positive and higher negative affect levels than during the engagement video.

**b. How do heterosexual men perceive the actress in the sexual videos, including engagement, ambiguous, and distress cues?**

*Actress's sexual arousal, pleasure, consent and want for intercourse:* During the visualization of the video with distress sexual cues, participants will perceive the actress with less sexual arousal, experiencing less pleasure, and consenting and wanting intercourse less than during the engagement stimulus.

*Actress's basic emotions:* During the visualization of the video with distress sexual cues, participants will perceive the actress experiencing more negative emotions, and less happiness than during the engagement scene.

## **2. METHOD**

### **2.1. Participants**

The sample in this study consisted of 50 heterosexual male aged between 18 and 38 ( $M = 24.34$ ;  $SD = 4.92$ ). All men were heterosexual and fluent in Portuguese, as these were requirements for the participation in the study. Among the participants, 42 (84%) were Portuguese, four (8%) were Brazilian, and three (6%) held dual nationalities. Only one participant identified as both Portuguese and Colombian.

### **2.2. Methodology and instruments**

The study involved the presentation of sexual videos to participants and the measurement of their emotions and sexual arousal before and during each stimulus. After watching the videos, the participants' perception of the actress's arousal and emotions was also measured.

This study used six videos, including three nature scenes that served as a neutral stimulus shown in between the sexual videos, to return the individual's emotional status to the baseline. The three sex videos consisted of sexual acts where the actress exhibits engagement cues, neutral emotion, and is in distress, all from the men's perspective.

Prior to viewing any stimulus, participants answered questions about their level of arousal (intensity of their emotions, sexual arousal, and sexual desire), and emotional valence (how positive and how negative they felt). They also completed the Portuguese version of Positive and Negative Affect Scale (PANAS), a two-measure questionnaire with 10 items, including a list of positive affects (interested, enthusiastic, excited, inspired, determined, proud, active, charmed, warm and pleasantly surprised) and a list of negative affects (distressed, tormented, afraid, scared, nervous, shaky, remorseful, guilty, irritable and disgusted), (Galinha & Pai-Ribeiro, 2005).

During the video-watching trials, facial expressions were analyzed using FaceReader. Even though the data was not analyzed in this thesis, it had the intention of informing about the emotions experienced by the participants (angry, disgusted, happy, neutral, sad, scared, and surprised).

After each stimulus, participants were questioned again about their arousal and emotional valence during the viewing, and were asked to respond to the PANAS scale once more. They also provided feedback on their perception of the actress's arousal (her level of sexual arousal, pleasure, and consent, and how much she wanted intercourse), their perception of the actress's emotions (fear, anger, happiness, disgust, surprise, sadness, neutrality and pain), the attractiveness of the actress, their level of immersion during the videos, and their knowledge of kink practices.

Finally, the study collected sociodemographic data through an online questionnaire conducted in the laboratory at the end, including age, nationality, gender, sexual orientation, and two additional scales: Sexual Experiences Survey - Short Form Perpetration (SES-SFP), (Koss et al., 2007) and Sexual Inhibition and Sexual Excitation Scales (SIS/SES), (Janssen, 2002). The SES scale assessed the perpetration of unwanted sexual experiences (Koss et al., 2007), while the SIS/SES scale measured the propensity for sexual inhibition and excitation in men (Janssen, 2002).

The study had six versions, with the order of the videos shown being counterbalanced among participants. Additionally, the order of the questions pertaining to the same category was also randomized, reducing potential biases.

### **2.3. Recruitment and Setting**

Participants were recruited through the distribution of flyers and posters around the faculty, and via emails from the faculty's student association and communication services.

Once in the laboratory, all the participants received the consent form, which guaranteed confidentiality, anonymity, and communicated the risks associated with the study. The experiment was conducted in a well-lit room, where the subjects were instructed to find a comfortable seating position and follow the instructions displayed on the computer as soon as the experiment began. In a separate room, the experimenter would start the session, ensuring the correct version was being used and introducing the code for the responses. All participants were included in the data analysis, since there were no anomalies or problems.

## 2.4. Data analysis

Upon completion of the data collection, the data was imported into SPSS (Statistical Package for the Social Sciences), version 29, to conduct statistical analyses.

Initially, repeated measures MANOVAs were performed, followed by repeated measures ANOVAs, to analyze self-reported arousal (including measures of “desire”, “general arousal”, and “sexual arousal”), PANAS scale, perception of actress’ arousal (“sexual arousal”, “pleasure”, “consent”, and “wantness”), and the perception of the actress's emotions, considering the watched video.

Lastly, repeated measures ANOVAs were carried out for the variables of self-reported emotional valence. Regarding sphericity of all repeated measures ANOVAs, sphericity is assumed when the Wilks Lambda in Mauchly’s Tests is not significant. When it is significant, Huynh-Feldt correction is applied when the Greenhouse-Geisser correction exceeds 0.75, becoming overly conservative (Huynh & Feldt, 1976, as cited in Field, 2017). Otherwise, Greenhouse-Geisser is used. For every significant effect, pairwise comparisons were examined, incorporating Bonferroni corrections.

Subsequently, the SES scales were scored, categorizing participants based on category and prevalence of sexual aggression perpetration. T-tests determined differences between perpetrators and non-perpetrators in the sample. Regarding the scoring of the SIS/SES, the levels of sexual excitation or inhibition that each participant exhibited were examined, as well as relationships with other variables, using Pearson’s correlations.

Lastly, Spearman correlations were executed for additional analyses involving other variables also under study.



### 3. RESULTS

#### 3.1. Participants' Arousal

A repeated measures MANOVA was conducted, between the three measures of self-reported arousal (“desire”, “general arousal”, “sexual arousal”) and type of video (engagement vs. ambiguous vs. distress). There were statistically significant results ( $F(6, 47) = 26.48, p < .001, \eta_p^2 = 0.783$ ), indicating differences in the three indicators.

Concerning desire, the one-way repeated measures ANOVA revealed a significant effect of video type on desire responses ( $F(1.45, 71.08) = 87.11, p < .001, \eta_p^2 = 0.640$ ). Pairwise comparisons were looked at, making it evident that participants reported higher desire during the engagement video ( $M = 45.07, SE = 3.78$ ) compared to the others. However, the mean score indicates a relatively low desire score. Participants exhibited low desire for both the ambiguous video ( $M = 11.56, SE = 2.75$ ) and the distress video ( $M = 9.36, SE = 2.53$ ).

Furthermore, a one-way repeated measures ANOVA was performed for general arousal, which was significant ( $F(2, 98) = 27.77, p < .001, \eta_p^2 = 0.362$ ). The distress video seemed to generate higher general arousal in participants ( $M = 67.62, SE = 3.25$ ) compared to the other videos. Conversely, during the engagement video, participants reported average general arousal ( $M = 50.26, SE = 3.24$ ), higher than the reported during the ambiguous video ( $M = 37.19, SE = 3.70$ ).

Finally, concerning sexual arousal, there was an effect of the videos on participants' sexual arousal ( $F(1.67, 81.70) = 69.26, p < .001, \eta_p^2 = 0.586$ ). During the engagement stimulus, participants indicated higher sexual arousal ( $M = 42.29, SE = 3.79$ ) compared to the other videos, even though the scores were relatively low. Both the ambiguous ( $M = 10.74, SE = 2.60$ ) and the distress stimulus ( $M = 8.82, SE = 2.51$ ) seemed to result in low sexual arousal among participants.

#### 3.2. Participant's Emotional Valence

A 3x2 repeated-measures ANOVA was conducted, examining the effects of type of video (engagement vs. ambiguous vs. distress) and type of valence (negative vs. positive).

Results revealed a significant effect of video ( $F(2, 98) = 12.97; p < .001, \eta_p^2 = .209$ ) and a significant effect of valence type ( $F(1, 49) = 59.57; p < .001, \eta_p^2 = 0.549$ ). This indicates differences in overall emotional valence responses during each video, as well as differences in scores between positive and negative valence in general.

Moreover, there was a statistically significant interaction effect, ( $F(2, 98) = 198.36; p < .001, \eta_p^2 = .802$ ). Looking at the pairwise comparisons table, during the engagement video, participants reported lower negative emotional valence ( $M = 12.04, SE = 2.31$ ) compared to the ambiguous video ( $M = 57.20, SE = 4.21$ ). However, participants indicated a significantly higher negative valence in the distress video ( $M = 81.69, SE = 2.91$ ) than the rest.

Regarding positive valence, in the engagement stimulus, participants scored higher ( $M = 58.51, SE = 3.32$ ) compared to the ambiguous and distress videos. However, no significant differences were found when viewing the ambiguous ( $M = 12.44, SE = 2.86$ ) and distress ( $M = 6.86, SE = 2.01$ ) videos.

### **3.3. Participant's Positive and Negative Affect**

With a repeated-measures MANOVA, the effects of type of video (engagement vs. ambiguous vs. distress) on affect (positive vs. negative) were examined. There was a significant effect ( $F(4, 194) = 63.56; p < .001, \eta_p^2 = 0.567$ ), indicating that there are differences between the three types of videos on both affect. Within-subjects ANOVAs were done to analyze each effect on affect further.

Regarding the positive affect, a substantial effect was observed ( $F(1.36, 66.86) = 52.40; p < .001, \eta_p^2 = 0.517$ ). During the engagement video, participants displayed significantly higher positive affect ( $M = 21.94, SE = 1.08$ ) compared to the ambiguous and distress videos. Additionally, the ambiguous video ( $M = 14.00, SE = 0.48$ ) had slightly lower positive affect scores than the distress video ( $M = 16.22, SE = 0.61$ ).

A significant effect is shown in the negative affect, ( $F(2, 98) = 97.46, p < .001, \eta_p^2 = 0.665$ ). Participants reported lower negative affect, on engagement ( $M = 11.38, SE = 0.31$ ) than in the other videos. In the distress video, they indicated higher negative

affect ( $M = 25.28$ ,  $SE = 1.15$ ) compared to the ambiguous video ( $M = 17.90$ ,  $SE = 0.91$ ).

### 3.4. Perception of Actress' Responses

A repeated measures MANOVA was conducted, exploring the effects of type of video (engagement vs. ambiguous vs. distress) and actress's responses (sexual arousal, pleasure, consent, and wantness). There were statistically significant results ( $F(8, 42) = 196.89$ ,  $p < .001$ ,  $\eta_p^2 = 0.974$ ), indicating differences in the four indicators.

Subsequently, one-way repeated measures ANOVAs were performed for each of the four variables. Regarding actress sexual arousal, a substantial effect was observed ( $F(1.65, 81.06) = 369.12$ ,  $p < .001$ ,  $\eta_p^2 = .883$ ). This signifies that participants perceived a high level of sexual arousal in the actress during the engagement video ( $M = 75.76$ ,  $SE = 2.99$ ), significantly higher than in the ambiguous ( $M = 1.97$ ,  $SE = 0.53$ ) and distress ( $M = 6.59$ ,  $SE = 2.21$ ) videos, both with similar low levels of actress sexual arousal.

Regarding actress pleasure, a highly significant effect was observed ( $F(1.74, 85.22) = 437.80$ ,  $p < .001$ ,  $\eta_p^2 = 0.899$ ). Participants' responses indicated that the engagement video portrayed the actress with a significant amount of pleasure ( $M = 75.00$ ,  $SE = 2.90$ ), far more than in the other stimuli. Both the ambiguous video ( $M = 2.12$ ,  $SE = 0.57$ ) and the distress video ( $M = 6.00$ ,  $SE = 2.07$ ) were not different in terms of the actress's demonstration of pleasure, scoring low.

On actress consent, a substantial effect was found ( $F(1.76, 86.04) = 235.04$ ,  $p < .001$ ,  $\eta_p^2 = 0.827$ ). Participants responded that the actress demonstrated greater consent in the engagement video ( $M = 94.41$ ,  $SE = 1.74$ ) compared to the other videos. Conversely, in the distress video, participants perceived less consent from the actress ( $M = 6.73$ ,  $SE = 2.44$ ) compared to the ambiguous video ( $M = 33.50$ ,  $SE = 4.10$ ).

Finally, a substantial effect was once again observed on wantness ( $F(2, 98) = 432.88$ ,  $p < .001$ ,  $\eta_p^2 = .898$ ). During the engagement scene, the actress demonstrated a greater desire for the sexual encounter ( $M = 83.03$ ,  $SE = 2.88$ ), according to participants. In the ambiguous video ( $M = 7.12$ ,  $SE = 1.85$ ) and the distress video ( $M =$

3.76, SE = 1.59), participants indicated that the actress did not seem to desire the encounter, with similar scores in both conditions.

### **3.5. Perception of Actress' Basic Emotions**

Lastly, a repeated measures MANOVA was conducted to analyze the effects of the type of video (engagement vs ambiguous vs. distress) on participants' perceptions of the actress's emotions (anger, disgust, fear, happiness, neutral, pain, sadness, and surprise). This analysis revealed statistically significant results ( $F(16, 34) = 69.65, p < .001, \eta_p^2 = .970$ ), indicating differences in the eight indicators.

Subsequently, the eight emotions were analyzed through one-way repeated measures ANOVAs for each variable (see table 1).

**Table 1**

*Mean, standard error and repeated measures analyses of variance between type of video and actress's basic emotions*

Emotions	Engagement		Ambiguous		Distress		F	df (factor, error)	p	$\eta^2$
	Mean (SE)	Mean (SE)	Mean (SE)	Mean (SE)						
Anger	1.66 (0.63)	29.88 (3.65)	70.48 (3.92)	147.97	2,98	<.001	0.751			
Disgust	2.47 (0.71)	47.85 (4.90)	84.55 (2.99)	176.14	1,58, 77.22	<.001	0.782			
Fear	2.74 (1.06)	21.72 (3.79)	82.17 (3.24)	271.29	1,78, 87.21	<.001	0.816			
Pain	4.84 (1.42)	20.26 (3.52)	80.89 (3.37)	232.80	1,82, 89.06	<.001	0.826			
Sadness	3.45 (1.16)	59.40 (4.73)	80.80 (3.45)	164.85	1,85, 90.48	<.001	0.771			
Happiness	70.03 (3.34)	1.97 (0.67)	4.17 (1.89)	313.82	1,46, 71.35	<.001	0.865			
Neutral	13.18 (2.55)	69,31 (4.95)	6.96 (2.05)	93.11	1,36, 66.85	<.001	0.655			
Surprise	19.37 (3.15)	4.01 (1.01)	23.68 (3.89)	15.90	1,83, 89.70	<.001	0.245			

*Note.* df = degrees of freedom

### 3.6. Additional analyses

Spearman correlations were also conducted to perform additional analyses, and only the statistically significant correlations were reported.

#### 3.6.1. Attractiveness

Firstly, participants perceived the actress as averagely attractive, since the results were between 0 and 6, and the mean of responses 2.94 (SE = 0.20).

The attractiveness of the actress showed a moderate correlation with the immersion variable ( $r = .358, p = .011$ ), indicating that participants who reported higher immersion also scored higher for the actress's attractiveness.

Moreover, attractiveness was negatively correlated with negative valence ( $r = -.356, p < .001$ ) and positively correlated with positive valence ( $r = .324, p < .001$ ), both with medium effects. This suggests that participants who found the actress more attractive, reported less negative valence and more positive valence, particularly in the engagement video.

Also, during the distress video, participants' reported positive affect was positively correlated with how attractive they found the actress ( $r = .319, p = .024$ ), as well as the negative affect ( $r = .368, p = .009$ ). Participants who considered the actress highly attractive reported higher positive and negative affect during the distress situation.

Furthermore, positive correlations were also found between attractiveness and participants' general arousal in the ambiguous ( $r = .323, p = .022$ ) and distress ( $r = .441, p = .001$ ) videos. This implies that participants who rated the actress as more attractive reported higher general arousal during the ambiguous and distress videos.

Regarding the actress's emotions, correlations emerged in the distress video, with only the emotion of fear showing a positive correlation ( $r = .352, p < .012$ ). This indicates that participants who found the actress more attractive perceived her as more fearful during the distress situation.

### 3.6.2. Immersion

Participants in general did not feel very immersed in the videos, with responses ranging from 0 to 6 ( $M = 2.04$ ,  $SE = 0.23$ ).

For the engagement stimulus, there was a negative correlation with negative emotional valence ( $r = -.282$ ,  $p = .047$ ). Participants who felt more immersed experienced lower negative valence in this stimulus. Additionally, immersion was positively correlated with desire ( $r = .397$ ,  $p = .004$ ), general arousal ( $r = .292$ ,  $p = .040$ ), and sexual arousal ( $r = .351$ ,  $p = .013$ ) felt during the engagement condition. This implies that participants who were more immersed in the videos, particularly during the engagement video, reported higher levels of self-reported arousal.

Moreover, only positive affect was positively related to immersion during both the engagement ( $r = .333$ ,  $p = .018$ ) and distress ( $r = .288$ ,  $p = .043$ ) situations, both with a medium effect. Participants who reported higher immersion also experienced greater positive affect during both situations.

Lastly, a negative correlation was found between the actress's fear during the ambiguous video, with a medium effect size ( $r = -.295$ ,  $p < .001$ ). This indicates that participants who felt more immersed perceived the actress as less fearful, specifically during the ambiguous situation.

### 3.6.3. Kink practices

Regarding the knowledge of kink practices such as consensual non-consent activities, participants in general were not very familiar with them ( $M = 2.08$ ,  $SE = 0.27$ ), ranging from 0 to 6, as well.

There was only a negative correlation found between the negative valence and kink ( $r = -.306$ ,  $p = .030$ ) on ambiguous, indicating that participants who were more familiar with it showed lower negative valence during the ambiguous video.

### 3.6.4. SES-SFP (Koss et al., 2007)

Normally, two scoring methods are usually employed: categorizing subjects into non-mutually exclusive and mutually exclusive categories (Koss et al., 2007; Martins et al., 2013). In this thesis, the mutually exclusive method was used, which means that only the most severe experience is counted, categorizing individuals as "Non-perpetrator," "Sexual contact perpetrator," "Sexual coercion perpetrator," "Attempted rape perpetrator," or "Rape perpetrator". Furthermore, the questionnaire distinguishes acts committed in the past twelve months from those performed from the age of 14 up to the previous year. Thus, the scoring was done separately for these two periods (see Table 2).

**Table 2**

*Participants' perpetration since 14 and in the last year*

Perpetration	Since 14	Last 12 months
Non perpetrator	76 (n = 38)	92 (n = 46)
Sexual contact perpetrator	12 (n = 6)	4 (n = 2)
Sexual coercion perpetrator	8 (n = 4)	2 (n = 1)
Attempted rape perpetrator	2 (n = 1)	2 (n = 1)
Rape perpetrator	2 (n = 1)	0

*Note.* In percentage

According to the lifetime prevalence, 76% (n=38) of participants did not have any perpetration in their life until now. However, 16% of participants (n=8) did some type of perpetration before the last year, but none in the last 12 months. On the other hand, eight percent (n=4) of all participants committed perpetration since they were 14 years old, and some of those experiences happened in the last 12 months. Lastly, one participant admitted to rape a woman sometime in his life.



Also, men were divided into two groups (perpetrators and non-perpetrators) based on whether they had engaged in perpetration, regardless of the type. Before the past year since the age of 14, there were 12 perpetrators and 38 non-perpetrators in this time period. In the last year, 4 were perpetrators and 46 non-perpetrators. To analyze the impact of aggression perpetration on participants' responses to the videos, all previous analyses were repeated, including aggression perpetration since 14 as a between-subjects factor. However, in none of the analyses, an effect of the group ( $p_{\text{valence}} = .443$ ,  $p_{\text{posaffect}} = .362$ ,  $p_{\text{negaffect}} = .318$ ,  $p_{\text{p\_desire}} = .893$ ,  $p_{\text{p\_generalarousal}} = .423$ ,  $p_{\text{p\_sexualarousal}} = .936$ ,  $p_{\text{a\_arousal}} = .054$ ,  $p_{\text{a\_pleasure}} = .120$ ,  $p_{\text{a\_wantness}} = .430$ ,  $p_{\text{a\_consent}} = .268$ ,  $p_{\text{a\_anger}} = .732$ ,  $p_{\text{a\_disgust}} = .211$ ,  $p_{\text{a\_fear}} = .168$ ,  $p_{\text{a\_happiness}} = .129$ ,  $p_{\text{a\_neutral}} = .574$ ,  $p_{\text{a\_pain}} = .281$ ,  $p_{\text{a\_sadness}} = .875$ ,  $p_{\text{a\_surprise}} = .333$ ) or an interaction effect with this group ( $p_{\text{valence}} = .557$ ,  $p_{\text{posaffect}} = .375$ ,  $p_{\text{negaffect}} = .117$ ,  $p_{\text{p\_desire}} = .052$ ,  $p_{\text{p\_generalarousal}} = .173$ ,  $p_{\text{p\_sexualarousal}} = .027^1$ ,  $p_{\text{a\_arousal}} = .309$ ,  $p_{\text{a\_pleasure}} = .077$ ,  $p_{\text{a\_wantness}} = .052$ ,  $p_{\text{a\_consent}} = .381$ ,  $p_{\text{a\_anger}} = .892$ ,  $p_{\text{a\_disgust}} = .371$ ,  $p_{\text{a\_fear}} = .475$ ,  $p_{\text{a\_happiness}} = .374$ ,  $p_{\text{a\_neutral}} = .377$ ,  $p_{\text{a\_pain}} = .568$ ,  $p_{\text{a\_sadness}} = .639$ ,  $p_{\text{a\_surprise}} = .047^1$ ) was found to be statistically significant.

### 3.6.5. SIS/SES (Janssen, 2002)

An analysis was also conducted for the SIS/SES questionnaire to comprehend any propensity for sexual inhibition (SIS1 - sexual inhibition due to the threat of performance failure, and SIS2 - sexual inhibition due to the threat of performance consequences) or excitation (SES) within the sample (see Table 3). Furthermore, there were nine participants that were within the mean in all three subscales, and nineteen participants scored higher and/or lower in more than one subscale (38%).

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<sup>1</sup> Although significant, there were no differences in the pairwise comparisons table.

**Table 3***Participants' propensity for sexual excitation or inhibition*

Propensity	SES	SIS1	SIS2
Low	14 (n = 7)	42 (n = 21)	10 (n = 5)
High	26 (n = 13)	10 (n = 5)	26 (n = 13)
Within mean	60 (n = 30)	48 (n = 24)	64 (n = 32)

*Note.* In percentage

Moreover, Pearson's correlations were executed to further analyze the responses to this scale. Only two significant correlations of SES were found. Sexual desire felt during the engagement condition was positively correlated with SES ( $r = .512, p < .001$ ), indicating that participants with higher SES also reported higher sexual desire during the engagement scenario. Similarly, sexual arousal exhibited a similar correlation in the engagement video ( $r = .449, p < .001$ ), with participants who report higher SES also experiencing greater sexual arousal.

On the contrary, only three correlations were found between the variable SIS1 and negative affect in the engagement scenario ( $r = .521, p < .001$ ), and positive affect in the ambiguous video ( $r = .331, p = .019$ ), as well as the emotion of pain experienced by the actress during the distress scenario ( $r = -.302, p < .001$ ).

Finally, concerning SIS2, a medium-sized negative relationship was found with positive valence during the engagement stimulus ( $r = -.308, p = .030$ ). This implies that participants with higher SIS2 exhibit lower positive valence only after viewing the engagement scene. Similarly, in engagement, general arousal also has a negative correlation ( $r = -.301, p = .034$ ). Participants with higher SIS2 reported lower general arousal in this video. In the ambiguous video, there is a medium-sized positive correlation between SIS2 and negative affect ( $r = .350, p = .013$ ), suggesting that participants with higher SIS2 tend to experience more negative affect during the ambiguous stimulus.

### 3.6.6. Version

It was also important to understand if the order in which the videos were presented to the participants had any effect on the responses given. Hence, to explore this possibility, we repeated the previous analyses that explored the reactions towards the videos, including the version as a between-subjects factor. The majority of the effects of version (or interactions with version) were not statistically significant. Below there is a mention of the ones that were.

Regarding the PANAS scale, there was an effect on the interaction between video and version, ( $F(20, 136.93) = 1.88, p = .018, \eta_p^2 = 0.182$ ). Focusing on the positive affect, the new repeated measures ANOVA, showed a significant effect of interaction ( $F(6.71, 59.04) = 2.30, p = .040, \eta_p^2 = 0.207$ ). According to the pairwise comparisons, only in version ‘distress - ambiguous - engagement’ in all three videos, participants experienced low positive affect. In version ‘engagement - ambiguous - distress’, the positive affect perceived on engagement stimuli was similar to the ambiguous and distress videos, although the ambiguous was lower than the distress one. In version ‘ambiguous - engagement - distress’, the ambiguous video provoked the same low amount of positive emotion as the distress video. The same trend happened for version ‘ambiguous - distress - engagement’, where the ambiguous stimulus had the same results for positive affect as the distress video. In version ‘engagement - distress - ambiguous’ and ‘distress - engagement - ambiguous’, participants differed in positive affect in all conditions.

There were no significant effects of version on the perceived actress’ responses, in the repeated measures MANOVA, but there was an effect for factor version on the consent variable ( $F(5, 923.46) = 2.49, p = .045, \eta_p^2 = 0.220$ ). According to pairwise comparisons, participants who had the version ‘ambiguous - distress - engagement’ attributed less consent on the three videos than the participants of ‘distress - engagement - ambiguous’.

Lastly, another repeated measures MANOVA, according to the actress's emotions, was repeated with version as a between-subjects factor. There was an effect of the interaction between video and version ( $F(80, 143.43) = 1.43, p = .032, \eta_p^2 = 0.430$ ).

New repeated measures ANOVAs were conducted to better analyze this effect. Anger had a significant effect on the interaction of video and version ( $F(10,88) = 1.94$ ,  $p = .050$ ,  $\eta_p^2 = 0.181$ ). Practically all conditions in all versions were different, except in version 'distress - engagement - ambiguous', where engagement does not differ from the ambiguous video on actress's anger. Besides that, anger perceived in the ambiguous scene is similar to the one perceived in the distress one. Regarding expression of disgust by the woman, the repeated measures ANOVA had an effect of interaction of video and version ( $F(7.82, 68.86) = 2.33$ ,  $p = .029$ ,  $\eta_p^2 = 0.209$ ). In versions 'ambiguous - engagement - distress' and 'distress - ambiguous - engagement', on ambiguous and distress videos, participants did not differentiate the actress's disgust. However, in the version 'distress - engagement - ambiguous', engagement and ambiguous videos were similarly low. Emotion of fear also had similar results on the new repeated measures ANOVA with an effect on interaction ( $F(8.03, 70.65) = 2.24$ ,  $p = .034$ ,  $\eta_p^2 = 0.203$ ). According to the pairwise comparisons table, in versions 'engagement - ambiguous - distress', 'engagement - distress - ambiguous', 'ambiguous - engagement - distress' and 'distress - engagement - ambiguous', participants did not see any differences in actress's fear, between the engagement and ambiguous videos. Finally, concerning the emotion neutral, another effect was found on interaction ( $F(6.47, 56.89) = 2.64$ ,  $p = .022$ ,  $\eta_p^2 = 0.192$ ). In the version 'engagement - ambiguous - distress', ambiguous and engagement had higher neutrality than distress. On the contrary, in version 'distress - ambiguous - engagement', the ambiguous and distress video had relatively high results in the actress' neutral emotion, compared to the engagement scene. In versions 'engagement - distress - ambiguous', 'ambiguous - engagement - distress', 'ambiguous - distress - engagement' and 'distress - engagement - ambiguous', neutrality was low for both engagement and distress stimuli.

## **4. DISCUSSION**

In this study, the goal was to investigate how heterosexual men respond to sexual videos, including cues of engagement, ambiguity, and distress by the actress, as well as how they perceived her in these scenarios. The first research question was centered around understanding the impact of the actress's emotional state on participant's sexual arousal and emotional responses. As Allen and colleagues (2007) point out, individuals may experience physiological arousal to stimuli, but their perception of these reactions can vary widely. For instance, one person may experience physiological arousal and interpret it as positive and pleasurable, while others may experience shame or disgust, leading to a less pleasant experience (Allen et al., 2007).

### **4.1. Sexual arousal and emotional response**

The hypothesis that participants would exhibit lower sexual arousal when exposed to stimuli depicting the actress in distress was supported by the findings. This aligns with previous research, which has reported increased sexual arousal in response to consensual storylines and decreased arousal in response to non-consensual ones (e.g. Malamuth et al., 1980), even in genital responses (e.g. Fairweather et al., 2016). On the other hand, during the ambiguous video, men reported the same low desire and sexual arousal than in the distress one, indicating that they saw the ambiguous scene as negative, as well.

However, it is worth noting that participants showed relatively low mean scores for sexual arousal and sexual desire in response to the engagement stimulus. Some researchers suggest that the increase in violent pornography can result in the development of unrealistic ideas or undesirable patterns of sexual behaviour, including increased violence toward women (Linz, 1985; Linz et al., 1989; Lim et al., 2016). Besides that, it is expected that the controlled environment might have influenced the low results revealed. In fact, self-reported data of arousal can be easily subject to falsification (Rowland, 1999), as individuals may have a significant motivation to manipulate their responses, driven by potential social consequences (Freund, 1963, as cited in Rowland, 1999). Nevertheless, lab studies employing controlled visual sexual stimulation make it possible to direct the subject's attention in such a way that cognitive

content variation during sexual arousal is minimized (Rowland, 1999). More specifically, these videos emphasize the actress's cues of consent, highlighting the value of using these videos in future experiments.

The expectations for emotional response were confirmed as well. During the exposure to the distress stimulus, participants reported experiencing more negative emotions and fewer positive emotions. This aligns with the initial hypotheses, but also suggests that participants were empathetic toward the actress, as witnessing a non-consensual scene may provoke discomfort in viewers.

Conversely, the engagement stimulus evoked the opposite response, consistent with the expectations. Participants reported experiencing positive emotions when viewing a consensual and satisfying sexual interaction, which suggests that the portrayal of the actress's consent and enjoyment influenced participant's emotional responses positively. The ambiguous video scored between the other two videos, except for the positive emotional valence, which did not differ from the distress video. This means that individuals demonstrated the same low positive valence in both scenarios.

#### **4.2. Perception of the actress**

Turning to the second research question, understanding participants' perceptions of the actress's responses was essential for the validation of the presented videos. Based on the sexual enjoyment cues displayed by the actress, it was anticipated that participants would characterize her as highly aroused in the engagement scenario and less aroused in the distress one. Additionally, participants were expected to perceive the actress as experiencing high levels of pleasure, consent, and desire in the engagement scenario, with the opposite pattern in the distress situation. These expectations were largely met, contributing to the validation of both engagement and distress sexual videos.

However, concerning the ambiguous stimulus, variables such as sexual arousal, pleasure, and wantness yielded nearly identical scores to the distress stimulus. Participants seemed to interpret the ambiguous scene as negative, possibly due to the lack of clear cues regarding the actress's engagement and enjoyment. Nonetheless, they

perceived more consent in this stimulus compared to the distressing one, possibly because the actress displayed resistance and clear signs of discomfort in the latter.

Furthermore, participants reported that the actress experienced heightened negative emotions, including anger, disgust, fear, pain, and sadness, during the distress sexual act. In contrast, the actress displayed less happiness in this context. These perceptions align with the expected emotional cues, suggesting that the emotional portrayals were clear and salient.

Participants considered that the actress displayed a similar level of surprise in both the engagement and distress videos, while attributing little surprise to the ambiguous stimulus. The explicit nature of the stimuli may have led individuals to focus more on emotional cues related to consent and sexual violence, potentially making it challenging to identify surprise. Indeed, research has shown that men tend to have greater difficulty identifying subtle emotions in female faces compared to women (Hoffmann et al., 2010). This finding may help explain the results related to the emotion of surprise in our study, as it's possible that subtle expressions of surprise by the actress were less evident to male participants.

#### **4.1. Exploratory analyses**

Additional analyses were conducted to explore other variables studied, including participants' perceptions of the actress's attractiveness, their level of immersion in the videos, and their familiarity with kink practices, such as "consensual non-consent".

##### **4.1.1 Attractiveness and Immersion**

Participants generally rated the actress as moderately attractive. Interestingly, those who found the actress very attractive reported feeling more immersed in the scenarios. Immersion could lead to more focused attention to the video, and since a study showed that attention has the ability to enhance the perceived attractiveness of a face (Störmer & Alvarez, 2016), more attention to the actress might mean they see her as more attractive.

#### 4.1.2. Arousal

During the engagement video, men that were more immersed, reported more desire, sexual arousal and general arousal. This observation aligns with previous research highlighting that higher immersion leads to more focused attention on the sexual stimuli, ultimately enhancing the subjective sexual arousal (Pavic et al., 2023, Prause et al., 2007). Besides that, the amount of attention that heterosexual men allocate to the female actor contributes to their sexual response (Janssen et al., 2003).

However, regarding general arousal, attractiveness is positively related in the two situations without clear cues of consent. This relationship could be attributed to the theory of misattribution of arousal, where a state of high arousal causes individuals to misattribute this feeling to attraction (Little, 2014; White et al., 1981, as cited in Han et al., 2023), which causes them to rate women as more attractive, compared to control groups with normal general arousal (Beaton et al., 2022, as cited in Han et al., 2023).

#### 4.1.3. Emotional Valence and Affect

Regarding emotional valence, a correlation was observed with the actress's attractiveness, but only on the engagement stimulus. This means that participants who found the actress more attractive had fewer negative emotions but more positive emotions. Participants that watched a film with an actress they found attractive, self-reported having experienced positive emotions (Matsunaga et al., 2008), meaning high attractive faces have a positive influence on viewers (Han et al., 2020). Additionally, immersion was associated with reduced negative emotional valence and increased positive affect during the engagement stimulus. In fact, in a study conducted with virtual reality, highly immersive settings have been shown to elicit more positive emotions (Pavic et al., 2023). Alternatively, being more immersed in the distress video was associated with an increase of positive affect. This may seem counterintuitive, as distress scenes would typically evoke negative emotions. However, some men can experience sexual arousal even in non-consensual scenarios (Malamuth et al., 1986). Research has demonstrated that there is a positive correlation between positive emotions and sexual response in men (Peterson & Janssen, 2007). Therefore, it is possible that



participants who were more immersed in the distress video, were more focused on other components rather than the consensual cues, such as the actress, for example. This might have resulted in an increase in positive affect, despite the non-consensual nature of the scenario.

In fact, positive affect seems to also have a positive relationship with attractiveness, particularly in response to ambiguous and distress stimuli. The presence of an attractive woman in the videos may divert participants' attention from the context portrayed (Sui & Liu, 2009). Previous research has consistently shown that exposure to female nudity tends to elicit a positive effect on men's sexual arousal (Sigusch, Schmidt, Reinfeld, Wiedemann-Sutor, 1970; Steele & Walker, 1974, as cited in Fairweather et al., 2016). Additionally, there is evidence of disinhibition toward non-consensual cues featuring female nudity, although it is acknowledged that this effect is relatively small (Fairweather et al., 2016). Furthermore, studies suggest that the absence of an intimate context, as found on the ambiguous and distress conditions, might be a factor contributing to men's positive emotional responses to sexual content (Carvalho & Rosa, 2020).

Conversely, it was observed that the more participants found the actress attractive, the higher the negative affect they reported on ambiguous and distress videos. Indeed, adults tend to exhibit a 'negativity bias', which refers to their inclination to focus on and give more weight to negative information compared to positive information (Vaish, Grossmann, & Woodward, 2008, as cited in Ganzach & Yaor, 2019). For example, it has been observed that individuals tend to pay more attention to faces displaying negative emotions than to those displaying positive emotions (Oehman, Lundqvist, & Esteves, 2001, as cited in Ganzach & Yaor, 2019).

#### 4.1.4. Actress's emotions

Finally, men who rated the actress as more attractive also attributed more sadness to her during the ambiguous stimulus and more fear during the aggressive scene. Furthermore, a correlation was discovered between immersion and the actress's expression of fear in the ambiguous scenario. Since the videos do not contain clear cues of consent and actress enjoyment of the sexual act, men who seem to find the actress

attractive could empathize more with her. A study revealed that physical attractiveness plays a role in enhancing empathic responses, with individuals showing greater empathy toward attractive individuals experiencing pain compared to less attractive individuals in pain (Van Leeuwen et al., 2009, as cited in Meng et al., 2020). Also, a more immersed state could lead to an enhancement in their emotional responses (Riva et al., 2016), which could make individuals more sensitive to the actress's emotions, namely sadness (in a situation where the actress shows a neutral face) and fear (in a forced sexual situation, where she shows resistance and distress).

#### 4.1.4. Kink practices

Kink refers to sexual practices that are considered atypical when compared to what is considered "normal" in terms of sexuality (Ling et al., 2022). In the concept known as "consensual non-consent", participants negotiate activities that may involve them saying "no" or "fighting back" unless a previously agreed-upon safeword is used (Ling et al., 2022), being "a conscious, negotiated suspension of one's limits" (Moser, 2006). This dynamic can complicate the understanding and managing consent within these relationships (Mincer, 2018, as cited in Ling et al., 2022). Consequently, it was expected that those who were familiar with this practice might encounter challenges in identifying the actress's cues of non-consent and her emotions, potentially leading to different emotional responses.

However, only one correlation was found regarding the negative emotional valence reported in the ambiguous stimulus, where individuals more familiar with kink practices displayed less negative valence. Individuals familiar with these practices may have more open attitudes toward sexuality (Tellier, 2017), and be less inclined to label situations as negative unless there is clear evidence of non-consent.

#### 4.1.5. SES (Koss et al., 2007)

Within the sample, some participants had committed acts of sexual perpetration, so a separation into aggressor and non-aggressor groups was done. Existing research suggests that there are some differences between these two groups, notably in the sexual

arousal reported in the more aggressive stimulus. Perpetrators may exhibit higher levels of sexual arousal to non-consensual sexual scenarios (Lalumière et al., 2003), and emotional responses, such as reduced empathy and being detached from their victims (Dietz, Hazelwood, and Warren, 1990, as cited in Nitschke et al., 2012). However, the results of this study do not indicate any significant differences between the groups in any of the variables studied. This limitation could be attributed to the fact that, in previous studies, men who have committed the most severe acts of perpetration (rape or attempted rape) are the ones typically studied, while in the sample to this study, only one man was classified as such. So, it is possible that the sample size may not have been large enough to detect statistically significant differences between the groups.

#### 4.1.6. SIS/SES (Janssen, 2002)

Sexual excitation propensity positively correlated with sexual desire and sexual arousal in the engagement video, aligning with expectations for this measure.

However, when considering sexual inhibition, participants with higher scores on sexual inhibition due to the threat of performance failure (SIS1) reported higher negative affect during the viewing of the engagement scene. Conversely, those with higher sexual inhibition due to the threat of performance consequences (SIS2) exhibit lower positive valence during these stimuli, as well as lower general arousal. These results suggest that individuals with higher SIS2 may experience a more negative emotional response and reduced overall arousal when exposed to explicit sexual content depicting consensual scenarios. Moreover, men with SIS2 pointed to more pain experienced by the actress during the distress situation. This finding aligns with the notion that individuals with higher SIS2 may be more sensitive to emotional cues related to discomfort or distress. It is important to note that self-schemas are formed based on prior experiences, and influence present encounters, and optimize the cognitive processing of sexual information (Elder et al., 2012). In fact, research has consistently shown that men with negative sexual self-schemas tend to exhibit reduced levels of sexual arousal in diverse sexual scenarios (Andersen et al., 1999, as cited in Nobre & Pinto-Gouveia, 2009). Feelings of inadequacy, guilt, shame, or anxiety related to sexual experiences could interfere with their ability to fully engage with and enjoy the content.

Alternatively, men with higher SIS1 reported more positive affect and men with higher SIS2 showed more negative affect during the ambiguous stimulus. In this scenario, the video is apparently more positive for the higher SIS1 men, while for the higher SIS2 participants, they find it more negative. Since the actress appears with a neutral face expression, and is not engaging in the sexual act, the individuals might interpret the situation in various ways. However, further research is needed to fully understand the nuances of these correlations, particularly in the context of the ambiguous video.

#### 4.1.7. Version

The order of the videos was counterbalanced between participants, meaning that each  $\frac{1}{6}$  of subjects viewed the videos in a different sequence. This variation in the viewing order could potentially impact the results. The more significant effects were according to the perception of the ambiguous video and comparing it to the distress, with participants having the same amount of positive affect in the ambiguous and distress conditions (ambiguous - engagement - distress; and ambiguous - distress - engagement), or perceiving the ambiguous one with less positive affect than the distress video (version engagement - ambiguous - distress). Besides that, participants attributed high neutrality (version distress - ambiguous - engagement), disgust (version ambiguous - engagement - distress; and distress - ambiguous - engagement) and anger (version distress - engagement - ambiguous) to the actress in the ambiguous and distress stimuli.

However, engagement and ambiguous videos were reported similar in some results, specifically in the actress' anger (version distress - engagement - ambiguous), disgust (version distress - engagement - ambiguous) and fear (version engagement - ambiguous - distress; engagement - distress - ambiguous; ambiguous - engagement - distress; and distress - engagement - ambiguous).

Alternatively, in version beginning with distress and ending with engagement cues, men experienced low positive affect in all videos, which suggests that beginning with such “aggressive” stimuli may have preconditioned the subjects to perceive the subsequent videos in a more negative or unfavorable manner. On the other hand, in the versions starting with engagement, or distress, and ending with ambiguous, subjects

differed in positive affect in all conditions, suggesting that there was not an influence of the order of the videos.

Regarding the perception of actress consent, participants who started with the ambiguous video and ended with engagement attributed less consent, in general, than the participants of version distress at the beginning, engagement and then ambiguous. The first two stimuli being considered negative and without cues of consent could have made individuals conditioned to not understand the consent cues of the engagement video. Moreover, having the ambiguous one first might have implications, since the version where distress is first, then ambiguous, did not have these results in the actress's consent.

Finally, it seems that the neutrality of the actress is clearly seen in versions engagement - distress - ambiguous; ambiguous - engagement - distress; ambiguous - distress - engagement; and distress - engagement - ambiguous, with participants attributing high neutral emotion in the ambiguous scenario, with engagement and distress with similar low scores.

## 5. CONCLUSION

In conclusion, the findings support previous research regarding sexual arousal and emotional responses to consensual and non-consensual videos. Additionally, the exploratory analyses shed light on the role of attractiveness, immersion, and familiarity with kink practices in shaping participants' perceptions and emotional experiences.

However, this study has several limitations that should be acknowledged. Firstly, the sample consisted exclusively of heterosexual men from a specific age group and demographic, which could limit the transferability of the findings. Additionally, the reliance on self-reported data introduces the potential for social desirability bias. Besides that, creating truly ambiguous sexual videos proved to be challenging, as individual differences and the order of video presentation could lead participants to interpret them as either positive or negative. This highlights the complexity of capturing genuine ambiguity in sexual content. Moreover, potential order effects, and a small group of sexual perpetrators also pose limitations. Finally, there was not a lot of exploration of participants' experiences with kink practices. Future research should address these limitations.

Despite this, the study contributes to a better understanding of how individuals respond to explicit sexual content, and their perceptions of the actress. It enhances individuals' differences and the relationship they have with the emotional and sexual responses, as well.

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