# SEXUAL MEDICINE

# Sexual Arousal and Sexually Explicit Media (SEM): Comparing Patterns of Sexual Arousal to SEM and Sexual Self-Evaluations and Satisfaction Across Gender and Sexual Orientation

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## ABSTRACT

**Introduction:** Investigations of patterns of sexual arousal to certain groups of sexually explicit media (SEM) in the general population in non-laboratory settings are rare. Such knowledge could be important to understand more about the relative specificity of sexual arousal in different SEM users.

**Aims:** (i) To investigate whether sexual arousal to non-mainstream vs mainstream SEM contents could be categorized across gender and sexual orientation, (ii) to compare levels of SEM-induced sexual arousal, sexual satisfaction, and self-evaluated sexual interests and fantasies between non-mainstream and mainstream SEM groups, and (iii) to explore the validity and predictive accuracy of the Non-Mainstream Pornography Arousal Scale (NPAS).

**Methods:** Online cross-sectional survey of 2,035 regular SEM users in Croatia.

**Main Outcomes Measures:** Patterns of sexual arousal to 27 different SEM themes, sexual satisfaction, and self-evaluations of sexual interests and sexual fantasies.

**Results:** Groups characterized by sexual arousal to non-mainstream SEM could be identified across gender and sexual orientation. These non-mainstream SEM groups reported more SEM use and higher average levels of sexual arousal across the 27 SEM themes assessed compared with mainstream SEM groups. Only few differences were found between non-mainstream and mainstream SEM groups in self-evaluative judgements of sexual interests, sexual fantasies, and sexual satisfaction. The internal validity and predictive accuracy of the NPAS was good across most user groups investigated.

**Conclusions:** The findings suggest that in classified non-mainstream SEM groups, patterns of sexual arousal might be less fixated and category specific than previously assumed. Further, these groups are not more judgmental of their SEM-related sexual arousal patterns than groups characterized by patterns of sexual arousal to more mainstream SEM content. Moreover, accurate identification of non-mainstream SEM group membership is generally possible across gender and sexual orientation using the NPAS. **Hald GM, Stulhofer A, Lange T, et al. Sexual Arousal and Sexually Explicit Media (SEM): Comparing Patterns of Sexual Arousal to SEM and Sexual Self-Evaluations and Satisfaction Across Gender and Sexual Orientation. Sex Med 2017;X:XXX–XXX.**

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**Key Words:** Sexually Explicit Media; Pornography; Sexual Arousal; Self-Evaluations

## INTRODUCTION

Sexual arousal to sexually explicit media (SEM) has traditionally been studied in the laboratory by exposing participants to different kinds of SEM. The conclusions emerging from these studies generally suggest that patterns of sexual arousal are more sensitive to context and less sensitive to the actor for women than for men.[1–3] However, very little research has investigated sexual arousal in relation to the actual SEM contents and themes (eg, oral, anal, gangbang, etc) people have been exposed to or report using.[1,4–7]

Among sex offenders, particularly those convicted of sexually violent or underage sexual offenses, sexual arousal to SEM contents congruent with the convicted crimes has been studied.[8,9] This research generally suggests significantly higher levels of sexual arousal to SEM among sexual offenders than among controls (eg, non-offenders or offenders not convicted of sexual crimes) when the SEM content is congruent with the nature of the offense.[9–12]

Contrary to research involving convicted sexual offenders or laboratory studies, non-laboratory investigations of SEM-related sexual arousal patterns in the general population are rare.[6] Further, research investigating whether non-mainstream arousal groups might be identified based on patterns of sexual arousal to SEM contents is missing from the literature on SEM.[6,7,13–17] Such identification could be useful because it does not rely on the individual's ability to identify or recognize what might be considered "non-mainstream" SEM. Further, such identification is based solely on actual patterns of sexual arousal to specific SEM contents as opposed to viewing habits, which might be (more) subject to the availability of the desired SEM contents.[6,7] In accord with the Non-Mainstream Pornography Arousal Scale (NPAS), non-mainstream SEM refers to patterns of sexual arousal to the SEM categories of (i) sadomasochism, (ii) fetishism, (iii) violent sex (including simulated rape, aggression, and coercion), (iv) bondage and dominance (including discipline), and (v) bizarre or extreme SEM[6,7] as identified by latent class analyses. Accordingly, the 1st aim of this study was to investigate whether non-mainstream SEM groups could be identified across gender and sexual orientation based on self-reported sexual arousal to 27 different SEM contents.

Little is known about systematic differences in individuals reporting sexual arousal to non-mainstream vs mainstream SEM in their sexual satisfaction and self-evaluative judgments of their sexual interests and fantasies. Research involving individuals with non-mainstream sexual arousal patterns (eg, a paraphilia) has suggested that increased self- and societal stigmatization, negative judgments, and evaluations of mental health could be present.[14–18] Such factors might adversely influence sexual satisfaction and individual judgments about sexual interests and fantasies among SEM minority user groups such as non-mainstream SEM users.[19,20] Therefore, the 2nd aim of this study was to investigate how patterns of SEM-induced sexual arousal, sexual satisfaction, and self-evaluated sexual interests and fantasies compare in groups characterized by sexual arousal to non-mainstream vs mainstream SEM.

Recently, Hald and Štulhofer[6,7] developed the NPAS. The NPAS is a 5-item scale measuring non-mainstream SEM-related patterns of sexual arousal (see also the Main Outcome Measures). However, further validation of the NPAS in relation to its actual ability to correctly predict non-mainstream SEM arousal group membership has not been conducted but has been called for.[7] Accordingly, a 3rd aim of this study was to investigate the ability of the NPAS to correctly predict non-mainstream SEM group membership.

This study used the same dataset that was recently used to develop the NPAS.[6,7] In connection to the 3rd study aim, the present findings should be considered an internal validation of the original measure to thoroughly test the robustness and precision of the NPAS.

## METHODS

### Participants and Procedures

Data from a larger dataset collected in an online study focusing on SEM use, sexual health, and relationship quality in Croatia were used. Because individuals who rarely used SEM were of little, if any, relevance for the planned analyses, only participants who reported using SEM at least "several times" in the previous 12 months were included in this study. In this regard, women had higher odds than men (odds ratio = 0.16, $P <$ .05) of belonging to the group of participants who rarely used SEM. There were no significant age or educational differences between participants who used SEM rarely and the rest of the sample.

2,035 participants with no missing values on questions regarding sexual arousal to different SEM content were included in the analyses. Most included participants (58.2%, n = 1,185) were women. Participants' ages ranged from 18 to 60 years (mean age = 30.75, SD = 9.47). Most participants (57.8%) had a college or university education; 41.0% had a secondary education. In contrast to the 15.7% of participants who reported that their monthly household income was lower than the national average, more than 1 fourth (27.8%) reported a higher-than-average household income. Most of the sample reported being in a relationship (47.6%) or married (24.0%), with less 1 third (28.4%) reporting being single. Apart from "weddings, funerals, and family holidays," a substantial proportion of participants (45%) never attended religious ceremonies.

The survey, conducted over 10 days in April 2014, was hosted on a commercial site dedicated to online research. Participant recruitment was diverse, including banners posted on Facebook, 2 major news websites, an online dating website, and a popular women's magazine website. Participants' IP addresses were not permanently recorded to ensure anonymity. Basic information about the study and other details needed for informed consent were provided at the 1st survey screen. Before accessing the questionnaire, participants had to confirm that they were of legal age (ie, ≥18 years). Study procedures were approved by the ethical review board of the Department of Sociology, Faculty of Humanities and Social Sciences, University of Zagreb.

### Main Outcome Measures

Below we present the indicators relevant for this study. The average time to complete the survey was just under 22 minutes.