

INTERSEX AND GENDER IDENTITY

The Pattern of Sexual Interest of Female-to-Male Transsexual Persons With Gender Identity Disorder Does Not Resemble That of Biological Men: An Eye-Tracking Study



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ABSTRACT

Introduction: Very little has been elucidated about sexual interest in female-to-male (FtM) transsexual persons.

Aims: To investigate the sexual interest of FtM transsexual persons vs that of men using an eye-tracking system.

Methods: The study included 15 men and 13 FtM transsexual subjects who viewed three sexual videos (clip 1: sexy clothed young woman kissing the region of the male genitals covered by underwear; clip 2: naked actor and actress kissing and touching each other; and clip 3: heterosexual intercourse between a naked actor and actress) in which several regions were designated for eye-gaze analysis in each frame. The designation of each region was not visible to the participants.

Main Outcome Measures: Visual attention was measured across each designated region according to gaze duration.

Results: For clip 1, there was a statistically significant sex difference in the viewing pattern between men and FtM transsexual subjects. Longest gaze time was for the eyes of the actress in men, whereas it was for non-human regions in FtM transsexual subjects. For clip 2, there also was a statistically significant sex difference. Longest gaze time was for the face of the actress in men, whereas it was for non-human regions in FtM transsexual subjects, and there was a significant difference between regions with longest gaze time. The most apparent difference was in the gaze time for the body of the actor: the percentage of time spent gazing at the body of the actor was 8.35% in FtM transsexual subjects, whereas it was only 0.03% in men. For clip 3, there were no statistically significant differences in viewing patterns between men and FtM transsexual subjects, although longest gaze time was for the face of the actress in men, whereas it was for non-human regions in FtM transsexual subjects.

Conclusion: We suggest that the characteristics of sexual interest of FtM transsexual persons are not the same as those of biological men. **Tsujimura A, Kiuchi H, Soda T, et al. The Pattern of Sexual Interest of Female-to-Male Transsexual Persons With Gender Identity Disorder Does Not Resemble That of Biological Men: An Eye-Tracking Study. Sex Med 2017;5:e169–e174.**

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Key Words: Sexual Interest; Sexual Video; Eye Tracking; Female-to-Male

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INTRODUCTION

Sexual function is an important aspect of well-being and quality of life for men, women, and people with gender identity disorder (GID). GID is strongly characterized by cross-gender identification with a feeling of discomfort with the person's anatomic sex and the gender role associated with the person's anatomic sex. The diagnosis is based on the person's description of incongruence between gender identity and phenotype and its assessment by mental health professionals. The most recent

epidemiologic study and review of GID reports showed prevalences ranging from 1:11,900 to 1:45,000 for male-to-female (MtF) transsexual persons and 1:30,400 to 1:200,000 for female-to-male (FtM) transsexual persons.¹ In the field of sexual function, very little has been elucidated concerning the sexual interest of people with GID. In general, several experiments have shown that there are many factors involved in sexual interest induced by the viewing of sexual video clips, the most striking factor of which in reporting sexual interest has been gender.^{2–4} For MtF individuals, an interesting study recently showed that there are two distinct subtypes of sexual interest in MtF individuals: homosexual MtF individuals are exclusively sexually attracted to men, whereas non-homosexual MtF individuals might be sexually attracted to women, to women and men, or to persons of neither sex.⁵ That study using several questionnaires indicated that sexual interest in MtF individuals is not always equivalent to that of biological women. However, sexual interest in FtM individuals has not been investigated scientifically. Transsexualism in genetic women has been believed to occur predominantly in homosexual women. It is unclear whether FtM individuals are always sexually attracted to women, although their surface appearance and personality are quite masculine because of testosterone replacement treatment. Indeed, it was previously reported that 1 of every 72 FtM individuals was attracted to men and not to women.⁶ However, the sexual interest of FtM individuals diagnosed medically has not been fully investigated. A previous study reported an interesting finding of sexual life in that homosexual FtM individuals (attracted to women) showed a significantly greater interest in visual sexual stimuli than non-homosexual FtM individuals (attracted to men).⁷ The status before or after sexual reassignment surgery (SRS) should be related to sexual activity in FtM individuals. Before SRS, half the people with GID perceived their sexual life as poor or unsatisfying or very poor of very unsatisfying, and there was no significant difference between FtM and MtF individuals.⁸ However, in a previous study, most FtM individuals reported an increase in sexual desire, although more than 60% of MtF individuals reported a decrease in sexual desire after the operation.⁹ An increase in the frequency of masturbation after testosterone replacement treatment and SRS also was reported by FtM individuals.^{9,10}

We recently conducted a study of a new eye-tracking system in which eye positions of subjects are recorded automatically while viewing sexual videos to evaluate which regions of the video are of interest to the subjects.^{11,12} This method is ideal because sexual interest can be evaluated quantitatively and non-invasively. After using this system, we reported that a sex difference existed in visual attention to a sexual video: men viewed the opposite sex for longer periods than women, and women viewed the same sex for longer periods than men.¹¹ We also found that the gaze time for non-human regions was significantly longer for women than for men.¹¹ However, no study of sexual interest has been conducted in FtM individuals with the eye-tracking system.

AIMS

The purpose of the present study was to compare the sexual interest of FtM individuals with that of heterosexual men by using our eye-tracking system and sexual videos.

METHODS

Participants

Fifteen healthy, heterosexual men (mean age = 36.1 ± 1.1 years) and 13 FtM individuals (mean age = 33.2 ± 2.5 years) participated in this study. All participants were Japanese. All participants were recruited from our personal acquaintances by personal communication. They underwent a screening interview regarding sexual activity by one physician (A.T.). All FtM subjects had received testosterone replacement therapy consisting of testosterone enanthate 250 mg injected every second week. The treatment period was 6.8 ± 1.9 months, and the serum testosterone level at nadir was 191.9 ± 30.3 ng/mL. Although none of the participants had undergone SRS, they were diagnosed as being FtM persons by mental health professionals.

Procedure and Sexual Stimuli

Our methodology was published previously.^{11,12} Briefly, the participants viewed audiovisual material in the form of three different sexually explicit video clips.

In each clip, because a region can be arbitrarily designated frame by frame on a static image, different sexually related and sexually unrelated regions can be designated. Each of the video clips used in this study was 4 minutes long, and we used an arbitrarily selected part of each clip, which was 40 seconds in length, to analyze the participants' regions of interest on the screen. Because we designated regions in 40 static images per second, the total number of designated regions included 1,600 static images. We developed a system that uses software to automatically add a point whenever a participant's line of sight lies within a designated region during the 1,600 checks, and thus the software can divulge in what regions the participant's eyes were focused on for 40 seconds. This system enables quantization of the regions in which the participants show interest when viewing video clips.

The designation of each region was not visible to the participants. They remained uninformed to the contents of each video clip, to their lines of sight being analyzed as they were watching the video clips, or to which parts were designated as regions of interest.

Eye movements of the participants were measured with the Quick Glance 2 Eye Tracker System (Eye Tech Digital Systems, Mesa, AZ, USA). The system consists of EyeTech TM2 software installed on a laptop computer, two infrared lights mounted on each side of the monitor, and a camera placed on the keyboard. To prepare for testing, each participant was positioned in front of the laptop computer, and the participant's position was calibrated to the position of the laptop screen based on 16 calibration points. If the calibration data proved inadequate, then repeated

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