Sociodemographic and Clinical Characteristics of Transsexual Individuals Who Presented to a Psychiatry Clinic For Sex Reassignment Surgery

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SUMMARY

Objective: The aim of the study was to investigate the sociodemographic and clinical characteristics of people with gender dysphoria, and to evaluate the differences between female-to-male (FtM) and male-to-female (MtF) transsexual individuals.

Method: This study retrospectively examined the sociodemographic and clinical characteristics of 139 cases with the diagnosis of gender dysphoria that were referred to the Cerrahpaşa Medical Faculty for sex reassignment surgery between 2007-2013.

Results: Among 139 patients with gender dysphoria, 102 were MtF (73.4%), and 37 were FtM (26.6%). Rates of unemployment, employment in jobs which do not require high school education, being a sex worker ($p < 0.001$), drug use ($p = 0.017$), and not having health insurance ($p < 0.001$) were significantly higher in MtF individuals than in FtM individuals. Rates of receiving psychotherapy for gender dysphoria ($p = 0.001$) and starting hormone therapy under the supervision of a doctor ($p < 0.001$) were significantly higher in FtM individuals, however rates of taking hormone therapy ($p < 0.001$) and undergoing surgery for sex reassignment ($p < 0.001$) were higher in MtF individuals.

Conclusion: There are significant differences both in sociodemographic characteristics and clinical characteristics between MtF and FtM individuals. However, further studies are needed to identify underlying causes.

Key Words: Gender identity, transsexualism, gender reassignment

INTRODUCTION

The diagnoses of "Gender identity disorder" and "transsexualism" by the World Health Organization (1992) and "gender identity disorder" or "gender dysphoria" by the American Psychiatric Association (1994, 2013) describe a clinical picture where there is an obvious discrepancy between one's internalized gender identity and biological sex so that the person might desire to live and be accepted as a member of the other sex (Bazarra-Castro et al. 2012). Because of this discrepancy, the person desires to eliminate primary and/or secondary sex characteristics which belong to his/her own body; but on the other hand aspires to possess the primary or secondary sex characteristics of the other sex. For this reason, the person who has "gender identity disorder" or "gender dysphoria" or who is defined as "transsexual" wishes to transform his/her body to become suitable for his/her own gender identity and he/she undergoes hormonal and surgical treatment (Vujovic et al. 2009).

As there are several terms designated to this clinical entity across classification systems, a confusion of concepts comes into question. The broad term "gender identity disorder" and its subdivision "transsexualism" are used in the International Classification of Diseases – 10 (ICD-10) (World Health Organization 1992), which is the official diagnostic tool used in health institutions of Turkey. Although similarly the term "gender identity disorder" was applied in DSM-IV, Diagnostic

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and Statistical Manual of Mental Disorders, (American Psychiatric Association 1994), it has changed into "gender dysphoria" in recently published current version of DSM (DSM-5, American Psychiatric Association 2013) to avoid stigma and discrimination in language. In this article, the term "gender dysphoria" will be employed to describe the clinical scene along with terms "transsexual", "male-to-female" (MtF) and "female-to-male" (FtM) which will characterize individuals who are experiencing it.

"Gender dysphoria" is considered to be a rare occurence (Green 2005), however there is a relatively low number of studies published on this topic. This might limit our knowledge about the actual extent of the diagnosis. In DSM-IV (American Psychiatric Association 1994), the prevalence rates are 1/30000 and 1/100000 in men and women, respectively. In DSM-IV (American Psychiatric Association 1994), the prevalence rates are 1/30000 and 1/100000 in men and women, respectively. In DSM-5 (American Psychiatric Association 2013) which was published recently, it was stated that prevalence rates are 0,005-0,014 % in adult men and 0,002-0,003 % in adult women, respectively. Prevalence rates in Turkey are unknown, as there is no data available to date regarding to the epidemiology of gender dysphoria.

In literature, there are many studies where MtF and FtM are compared with regard to socio-demographical and clinical features (Verschoor and Poortinga 1988, Tsoi 1992, De Cuypere et al. 1995). Although there are studies in Turkey where FtM are socio-demographically and clinically evaluated (Yuksel et al. 1996 and 2000), there are only a few studies where MtF and FtM are socio-demographically and clinically compared (Yüksel et al. 1992). In a study performed in Turkey, it was stated that more than 50% of FtM were college/university graduates, who lived in cities and 92,5% worked regularly (Yüksel et al. 2000).

Individuals who are diagnosed with gender dysphoria are recommended to undergo sex reassignment in order to bring their psychological states into a better place and experience self-realization by reducing the discomforts arising from staying in the biological sex which they do not want to (De Cuypere and Vercruysse 2009). In Turkey, the subject of transsexualism was first brought to agenda in 1988 with a paragraph added to the 29th article of Civil Law. However, since that regulation was not found sufficient with regard to the current conditions and consequences of sex reassignment, in 2002, a more detailed regulation was put in the 40th article of the Civil Law (Başara 2012). Within the scope of this law article, persons who apply for sex reassignment should be older than 18 years of age and should not be married. Additionally, these persons should document that they are in transsexual structure and sex reassignment is compulsory from mental well-being and they are permanently deprived of the ability to breed with a medical board report which was obtained from a training and research hospital (Başara 2012).

With this study, we primarily aim to document the socio-demographical and clinical features of gender dysphoria cases that were referred to Cerrahpasa Medical Faculty Department of Psychiatry by a court order for pre-assessment before sex reassignment between the years 2007 and 2013. Our second aim is to compare the socio-demographical and clinical features between transsexual individuals who want to undergo a sex reassignment from female-to-male (FtM) and from male-to-female (MtF). Our study is important with regard to adding to the knowledge obtained by a few number of studies performed in Turkey about transsexual individuals and constituting a ground for new researches which may reveal the probable reasons of the differences between FtM and MtF individuals.

METHODS

In this study, medical records of 139 people who were sent by courts for sex reassignment to Cerrahpaşa Medical Faculty Psychiatry Clinic between the years 2007 and 2013 were evaluated retrospectively. Individual applications outside of the court process were not included. In our clinic, clinical assessments were conducted by a psychiatrist, a resident in psychiatry and a psychologist. Clinical assessments contained multiple sessions in order to make sure the precise diagnosis was made and to eliminate major psychiatric pathologies that may affect patient's decision making or reasoning abilities (e.g. psychotic anomalies, dementia and mental retardation). The Cattell IQ test is applied to patients as a supportive clinical tool to evaluate decision making abilities. Cattell IQ test is a performance dependent but culture independent test which is applicable to the adult age group.

With regard to the real life experience (RLE) which is described as living the gender role which fits the internalized gender identity in his/her daily life, business life and in personal relationships (Moreno-Perez and Esteva de Antonio 2012), the cases were evaluated retrospectively by examining the medical records. To determine the RLE, only the information which was taken on the first appointment was taken into consideration in the study. RLE is substantial for clinical evaluation as it reveals one's adaptation to his/her environment with the gender to be transformed and one's determination for sex reassignment surgery (Bockting 2008). As our clinical practice required, reports to declare that gender reassignment was necessary to maintain patients' mental well-being were compiled for the patients who met all of the following criteria: (1) being unmarried and at least 18 years old at the time of the appointment, as the 40th article of the Civil Law requires; (2) having an official diagnosis of "gender identity disorder" according to DSM-IV (1994) or ICD-10 (1992) classification systems; (3) having at least one year of RLE since the first appointment.

In order to determine the socio-demographical and clinical features of the cases, two psychiatrists have prepared a structured data collection form. This structured form was filled in according to the cases' medical records and the same expert psychiatrist completed the whole data collection process. While recording the socio-demographical features, information like age, sex, education level, marital status, sexual orientation, work status, residence which were given in the first application were taken into consideration. For some cases, there was information about the school that the person last graduated from and for others education level was mentioned in year format. All dates regarding to educational level were converted into years to facilitate statistical analysis. Researchers recorded multiple clinical features of the individuals, including: IQ level, age of first presented to a doctor with gender identity related complaints, age of decision to have surgery, use of psychiatric treatment or psychotherapy for gender dysphoria, use of hormone therapy, family support, past suicide attempts, past use of recreational drugs, intent for sex reassignment, and RLE. All clinical features were gathered from individuals' medical files.

Statistical analysis

All statistical analyses were done by SPSS 16.0 program. Frequency and descriptive analyses of the data were performed. To evaluate if numerical data show normal distribution, Kolmogorov-Smirnov and Shapiro-Wilks tests were applied. Student's t-tests were used to compare normally distributed numerical data. Mann-Whitney U tests were used to compare non-normally distributed numerical data. Categorical data were analyzed by Chi-square tests and Fisher exact Chi-square tests. Statistical significance value was accepted as $p < 0.05$.

RESULTS

In our study, 139 subjects with gender identity disorder who were approved to undergo sex reassignment surgery were examined. 102 (73,4 %) of these cases were aiming to transform from male-to-female (MtF) and 37 (26,6 %) were aiming to transform from female-to-male (FtM). The average age of the cases was 27,66±6,921. No significant difference

Table 1. Sociodemographic Features of Transsexual Individuals and Comparisons

	FtM (n=37)		MtF (n=102)				Total (n=139)	
	n	**Mean±SD**	**n**	**Mean±SD**	**U**	**p**	**Number Acquired**	**Mean±SD**
Age (year)	37	26.65±10.05	102	27.67±5.42	1593	0.160	139	27.66±6.92
Educational Level (year)	36	11.08±3.32	95	9.19±3.77	1234.5	0.013*	131	9.71±3.74
Intelligence Quotient (IQ) (n=123)	32	108.44±20.14	91	99.76±23.12	1096	0.038*	123	102.02±22.63
	n	**Percentage**	**n**	**Percentage**	**χ2**	**p**	**Number Acquired**	**Percentage**
Marital Status								
Single	36	97.3	102	100			138	99.3
Married	1	2.7	0	0			1	0.7
Employment Status					25.791	<0.001*		
Jobs Requiring HE	11	45.8	13	54.2			24	17.8
Jobs not Requiring HE	12	21.1	45	78.9			57	42.2
Unemployed	5	13.5	32	86.5			37	27.4
Sex Worker	0	0	7	100			7	5.2
Student	8	80.0	2	20.0			10	7.4
Place of Residence					1.105	0.293		
Urban areas	35	26.3	98	73.7			133	97.1
Rural areas	2	50	2	50			4	2.9
Residing with					28.08	<0.001*		
Family	24	61.5	15	38.5			39	31.7
Friends	1	14.3	6	85.7			7	5.7
Partner	5	10.9	41	89.1			46	37.4
Alone	7	22.6	24	77.4			31	25.2
Sexual Orientation						1**		
Heterosexual	35	25.9	100	74.1			135	97.8
Homosexual	1	33.3	2	66.7			3	2.2
Bisexual	0	0	0	0			0	0

FtM: Female-to-Male; MtF: Male-to-Female; n: number; HE: Higher Education
*p<0.05 ; U: Mann-Whitney U Test; < 2: Chi square; ** Fisher's Exact Chi-Square test

Table 2. Means for Some Clinical Variables Related to Gender Dysphoria

	FtM		MtF		U/z	P
	n	Mean±SD	n	Mean±SD		
Age of first admission with gender dysphoria related complaints (n=124)	35	24.03±6.96	89	24.36±6.58	1390/-0.931	0.352
Age of considering sex reassignment surgery for the first time (n=95)	30	20.57±4.73	65	22.54±5.42	765.5/-1.681	0.093
Age of first sexual encounter (n=86)	27	16.48±2.83	59	14.81±3.51	524.0/-2.555	0.011*

FtM: Female-to-Male; MtF: Male-to-Female; n: number
*p<0.05 ; U/z: Mann-Whitney U Test

Table 3. Clinical Features of Transsexual Individuals and Comparisons

	FtM (n=37)		MtF (n=102)		χ2	p	Total (n=139)	
	n	%	n	%			Number Acquired	%
Hormone Therapy					48.200	<0.001*		
Still using/have used before	15	13.8	94	86.2			109	80.7
Never used before	21	80.8	5	19.2			26	19.3
Starting of Hormone Therapy						<0.001*,**		
With prescription	10	40.0	15	60.0			25	32.9
Without prescription	2	3.9	49	96.1			51	67.1
Sex Reassignment Surgeries					45.073	<0.001*		
Present	6	7.7	72	92.3			78	62.4
Absent	30	63.8	17	36.2			47	37.6
Number of Sex Reassignment Surgeries						1**		
Single surgery (breast, face, genitals)	2	7.1	26	92.9			28	36.4
Multiple surgeries	3	6.1	46	93.9			49	63.6
Real Life Experience						1**		
Present	31	25.4	91	74.6			122	96.1
Absent	1	20	4	80			5	3.9
Psychotherapy					11.172	0.001*		
Present	15	57.7	11	42.3			26	23.9
Absent	19	22.9	64	77.1			83	76.1
Family Support					0.015	0.901		
Present	20	28.2	51	71.8			71	63.4
Absent	12	29.3	29	70.7			41	36.6
Health Insurance					14.942	<0.001*		
Present	24	70.6	10	29.4			34	72.3
Absent	1	7.7	12	92.3			13	27.7
Suicide Attempt					0.032	0.858		
Present	6	31.6	13	68.4			19	19.6
Absent	23	29.5	55	70.5			78	80.4
Substance Abuse					5.742	0.017*		
Present	1	5.3	18	94.7			19	19.2
Absent	26	32.5	54	67.5			80	80.8

FtM: Female-to-Male; MtF: Male-to-Female; n: number; %: percentage
*p<0.05 ; χ2: Chi Square; ** Fisher's Exact Chi-Square test

was detected between the average ages of MtF and FtM cases (MtF: 27,67±5,4, FtM: 27,65±10,0). Regarding occupational status, working in jobs which do not require high education level (for example: being a street vendor or being a waiter), unemployment and being a sex worker stand out to be higher in MtF than in FtM. On the other hand, FtM were living mostly with their families and MtF with their partners or alone ($p < 0,001$). The socio-demographical features of the transsexual individuals are given in Table 1. The socio-demographic features of the transsexual individuals are given in Table 1.

The average education level was 11,08±3,32 in FtM and 9,19±3,77 in MtF, and the difference is statistically significant ($p=0,009$). The average age of the first sexual experience was 16,48±2,83 in FtM and 14,81±3,51 in MtF. This difference ($p=0,033$) between groups is statistically significant. The average values of some clinical variables about gender dysphoria are shown in Table 2.

Significant differences in many variables were detected by comparing the clinical properties of both groups. Having psychotherapy because of gender dysphoria was found to be significantly higher than in FtM than in MtF ($p=0,001$). The rate of having hormonal therapy in MtF cases was significantly higher than in FtM cases ($p<0,001$), but preferring to begin the hormone treatment under supervision of a doctor than to begin by oneself was significantly higher in FtM ($p<0,001$). The number of previous operations for sex reassignment and the types of operations also differed between the two groups. The rate of having undergone surgery in MtF cases was significantly higher than in FtM cases ($p<0,001$). Likewise, the rates of having had several surgeries for sex reassignment and having had a surgery on breasts/face or genital area in MtF cases was significantly higher than in FtM cases ($p<0,001$). Additionally, the rate of drug abuse in MtF cases was found to be significantly higher than that of FtM cases ($p = 0,017$). Besides, the rate of possessing health insurance in FtM cases was significantly higher than in MtF cases ($p<0,001$). The comparison of the clinical properties between groups is shown in Table 3.

DISCUSSION

In this study, the socio-demographical and clinical features of the cases who sent by court order to Cerrahpaşa Medical Faculty Psychiatry Clinic and who were diagnosed as "gender identity disorder" according to DSM-IV (American Psychiatry Association 1994) were retrospectively examined.

The MtF:FtM ratio (2,6:1) in our study was similar to that of previous studies in Spain (2,2:1) (Gomez-Gil et al. 2009), Belgium (2,4:1) (De Cuypere et al. 2007) and Netherlands (2,5:1) (Bakker et al. 1993). On the other hand, it is seen that the MtF rate (5,5:1) in Japan (Baba et al. 2011) and the FtM rate (1:5,5) in Poland (Herman-Jeglinska et al. 2002) outweigh. The average age of our case group is similar to the average age in the studies of Gomez-Gil et al. (2009) and Hedjazi et al. (2013). Some studies (De Cuypere et al. 2007, Smith et al. 2005, Olsson and Möller 2003) found that FtM individuals consulted doctors about sex reassignment surgery at younger ages than MtF individuals, but in other studies (Rakic et al. 1996, Tsoi 1990, 1992) MtF individuals consulted doctors at a younger age. In our study, there is no significant differences between the two groups with respect to the age which they consulted a doctor with an intention to undergo sex reassignment surgery.

As for the occupational status, it seems that the rates of having jobs which do not require higher education, being a sex worker and unemployed in MtF individuals is significantly higher than that in FtM individuals; and it seems that the rates of possessing health insurance in FtM individuals are significantly higher than in MtF individuals. As a result, MtF individuals may benefit less from health services, and thus might be more alienated by health care providers. Another finding which may be evaluated in line with the education level is that the IQ levels of MtF were found to be significantly lower than that of FtM ($p=0,03$). However this finding should be examined with society-based studies that include larger samples to ensure correct results.

For living situation, FtM's mostly live with their families whereas the MtF's live with their partners or alone. In the studies where MtF's and FtM's are compared socio-demographically and clinically (Verschoor and Poortinga 1988, Tsoi 1992, De Cuypere et al. 1995), in accordance with our findings, it was determined that MtF's have much lower levels of education and work at jobs which require no higher education or the provisional day jobs. Some authors this difference is based on MtF's exclusion from society (Fisher et al. 2013), and that being a woman causes loss of authority or power (Schilt and Wisvall 2008). This idea was supported by a study that evaluated the working environments of transsexual individuals (Law et al. 2011). In that study, in terms of the approaches of the work colleagues, it was seen that FtM's were received more positive approaches compared to MtF's. However in the same study, it was also found that there is no difference between FtM's and MtF's in terms of work efficiency. In another study, it was argued that women with masculine features are less likely to be disregarded than men with feminine features (Whitley and Aegisdottir 2000). In a Turkish study (Polat 2005), attitudes of family members towards transsexual individuals investigated and it was shown that MtF's had more likely to conceal their gender identity from family members and to receive negative approaches from their social environment. The conclusion of all of these studies is that in society, transition into a woman's

role is not as welcomed as transition into man's role (Feinman 1981, Sandnabba and Ahlberg 1999). In this context, MtF's walking away from their families, having difficulties in finding jobs, working at jobs which do not require a higher level of education or as sex workers or having health insurances at lower rates might be attributed to this approach within society (Gagne et al. 1997, Clements-Nolle et al. 2001). In this study, drug abuse among MtF individuals was significantly higher than FtM individuals. This finding is similar to the results of previous studies (Lombardi and van Servellen 2000, Bith-Melander et al. 2010) and might derive from the fact that MtF's are estranged from society.

The findings in our study state that MtF's had their first sexual experiences an average of 1.67 years before FtM's. This finding is concurrent with the results of an earlier study (Tsoi 1992). In our study, the ratio of receiving psychotherapy during the sex reassignment phase was significantly high in FtM's. Psychotherapy is among the main components of the sex reassignment process (Coleman et al. 2012) and its implementation is deemed necessary both for the diagnosis and proper application of the sex reassignment process (Moreno-Perez and Esteva de Antonio 2012).

During the sex reassignment process, psychotherapy is recommended for clarification of gender identity and managing the issues like disclosure to the close ones, acceptance by social environment, increasing social support and dealing with internalized transphobia (Coleman et al. 2012). Psychotherapy may be implemented in the forms of individual, couples, family or group therapy (Coleman et al. 2012). The group psychotherapy for transsexual individuals in Turkey was mostly conducted with FtM individuals (Yüksel et al. 1996, 2000). This might be attributed to difficulties in MtF individuals' access to health services as shown in our study.

Hormone treatment is another essential component of the sex reassignment process (Coleman et al. 2012). Its positive effects on mental health of the transsexual individuals during sexual transition process have been highlighted (Gomez-Gil et al. 2012, Colizzi et al. 2013, Heylens et al. 2014). In our study, the ratio of receiving hormone treatment was significantly higher in MtF individuals than that in FtM individuals. However instead of starting hormone treatment by themselves, starting the treatment under the supervision of a physician was the significantly higher among FtM's. Current literature supports the idea that MtFs commence hormone treatment more often without doctor supervision (Blanchard et al. 1987, Gomez-Gil et al. 2009). Starting such a treatment, which is potentially dangerous to human health (Becerra et al. 1999), may be an indicator of the level of discomfort that people with gender dysphoria suffer from their biological sexes (Gomez-Gil et al. 2009). The high ratio of hormone treatment among MtF's, and simultaneous high rate of starting it without doctor consultation might be explained by the fact that they are estranged from their families, who usually take part in this important decision, and that they have lower level of education.

Another finding that differs significantly between MtFs and FtMs is the ratio of going through surgeries that assist sex reassignment and the types of these surgeries. The ratio of MtF's going through surgeries for sex reassignment is significantly higher than FtM's. In a similar way, the ratios of MtF's individuals going through more than one sex reassignment surgery and their ratio of going through a surgery regarding the breasts/face or genital areas are significantly higher than in FtM's individuals. This might be explained by MtF's exclusion from the society due to their external appearances or their being very unpleased and discontent with their body or face appearances.

Also, since it is more difficult to transform a male face into a woman's face being much more difficult may be very effective in MtF's going through may face operations. Especially within the scope of the "facial feminization" which is aimed at obtaining more feminine facial features for the MtFs' faces having more masculine faces, many operation procedures may be implemented (Van de Ven 2008, Altman 2012).

There are some limitations in our study. The first one is that as the medical records evaluated retrospectively, there are some data missing. Secondly, only cases who had been referred with a court order were included in the study thus the results might not represent the entire gender dysphoria cases in society.

Conclusively, this study highlights that there are sociodemographic and clinical differences between MtFs and FtMs who applied for sex reassignment, and that the level of functionality is much lower in MtFs. These differences point out that MtF individuals are less likely to be accepted and recognized in society and experience more difficult life circumstances. With this in mind, there is a need for more comprehensive, population-based studies to understand which biological, psychological and social factors that might be associated with the differences between FtMs and MtFs who apply for sex reassignment.

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