Scottish Transgender Survey – Final Report.

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EXECUTIVE SUMMARY.

Questionnaires were distributed widely throughout Scotland to ascertain the needs and experiences of transsexuals in relation to lifestyle and services in Glasgow. Eventually 52 were available for analysis - from 39 transwomen and 13 transmen. 82% of the respondents were post-operative, which meant that they had had time to reflect on their experiences.

The mean age of respondents was mid 40s, but there was a wide age range. Half lived alone, and many reported family problems in relation to their transsexualism. None of the transmen had been married or had children, but two thirds of the transwomen had been married and half had children.

The post transition transpeople included a higher proportion of lesbians and bisexuals than the general population, and sexual orientation was regarded as fluid, challenging the accepted view that its pattern is set in early life. Some heterosexual transwomen experienced autogynephilia. Sexual satisfaction rates were low, but improved post transition. Few respondents had ever had any sexually transmitted infection.

Although the majority were satisfied with their appearance and felt that they were inconspicuous in public, one third were victim of transphobic attacks. Harassment and discrimination occurred in various settings but there were some positive experiences, particularly with police and in the workplace.

Mental health issues were common, with the majority having suffered from depression, suicidal ideation, anxiety or social withdrawal before transition. Most had been on medication such as anti depressants. They often had difficulties through childhood, and nearly half had episodes of self harm, mostly in the form of attempted overdose. Although post treatment quality of life measures were similar to the general population, transwomen still appeared disadvantaged in relation to social functioning and mental and emotional health.

There was general satisfaction with health service provision but there were individual reports of long waiting times, negative professional attitudes and lack of information for service users and service providers alike. Lack of hair removal services was frequently mentioned as a problem for transwomen. Self help groups were used and admired, but there were comments about lack of diversity within the groups.

The current picture of transsexualism in Scotland is one of overall satisfaction for those who are post transition. Those who have been able to put negative experiences behind them and engage with services were able to progress to a good quality of life. There is clearly still work to be done in ensuring equality of access to evidence based care for transsexuals in Scotland

INTRODUCTION

There is growing political and legal recognition of transsexual people in both the United Kingdom and Europe¹⁻³. It is also well recognised that there are many more non-transsexual transgender individuals. A survey conducted by research team members in 1999 calculated that there are about 300 patients with the condition clinically defined as Gender Identity Disorder (past or present) known to general practitioners in Scotland⁴. A Scottish Needs Assessment Programme report⁵ highlighted wide variation in service delivery and treatment for patients with Gender Identity Disorder and proposed the establishment of a Managed Clinical Network in Scotland to ensure equity of access to high quality evidence-based treatment.

Treatment for gender identity disorder (whether physical, psychological or both) is controversial, and there is a lack of good quality evaluations of the various treatments^{6,7}. From a NHS perspective, it is important to establish whether or not the benefits of treatment (of whatever kind) exceed the social and health service costs. As well as the financial costs of treatment, factors to be considered in a cost-benefit analysis include physical and psychiatric morbidity associated with the condition and its treatment, and social functioning.

We searched electronic literature databases (Medline, PsychLit, Web of Science and the Journal of Transgenderism database/web site) for published work. A comprehensive review of prospective studies of surgical gender reassignment in male-to-female transsexuals⁸ identified one small waiting-list controlled randomised trial, four studies in which patients were compared with a baseline measure, and six studies in which no baseline data were available. In these 11 studies, only three involved more than 40 patients. In all except two studies there were major losses to follow-up (34%-60%). There has only been one small study of female-to-male preoperative and postoperative transsexuals⁹, no long-term studies of patients with gender identity problems not treated surgically, and no studies of patients who have defaulted from treatment⁷.

The UK system of GP registration should allow good case ascertainment rates. Our earlier study of the prevalence of gender dysphoria in Scotland achieved excellent response rates from general practitioners (73%), responsible for 80% of the Scottish population⁴. Here we report on our attempt to survey all patients with gender identity problems known to GPs in Scotland, regardless of gender role and stage of transition. We aimed to collect comprehensive data on social functioning, morbidity, treatment and use of services, and mortality. In addition there is evidence¹⁰ that many people with gender identity problems are not known to mainstream medical services. Many of these people treat themselves with hormones obtained through the internet or by other means, and some pay for surgery abroad. It is likely that many of these people receive inadequate medical care. We therefore also attempted to recruit people for this survey through self-help groups and websites used by people with gender identity issues to ascertain their experiences and perceptions of barriers to NHS treatment

Aims

We aimed to describe the characteristics of people with gender identity problems, both known and not known to GPs in relation to gender role; social functioning; quality and satisfaction with life; morbidity; treatment and use of services.

Research questions

- 1. What are the characteristics of Scottish people with gender identity problems (male-to-female/female-to-male, preoperative/postoperative, age, employment and social status, known and not known to medical services)?
- 2. In which gender role are respondents living?
- 3. Which characteristics of people with gender identity problems are associated with satisfaction, dissatisfaction and health-related quality of life?
- 4. What is the history of physical and psychiatric morbidity among respondents?

- 5. What have been the social experiences of people with gender identity problems (eg discrimination, harassment, support)?
- 6. What use of medical services do people with gender identity problems make, what are the barriers to accessing appropriate services?
- 7. How satisfied are people with gender identity problems with their treatment and what services do they want?

METHODS

Study Population

Adult Scottish people who were identified by their general practitioners as having gender identity disorder (GID), and people with GID not known to NHS medical services.

Exclusion Criteria

People were excluded from the study if they:

- were under 16 years of age
- had a known biological intersex conditions (eg Klinefelter's syndrome, complete or partial androgen insensitivity etc)

Recruitment

The study team wrote to all GP practices in Scotland to invite them to participate in the study and to obtain anonymised information about patients known to have gender identity disorder. GPs agreeing to participate were then sent a letter asking them to contact all eligible patients to inform them about the study and to pass on a letter accompanied by a response form, information leaflet and questionnaire.

Patients were invited to indicate whether or not they would be happy to complete a questionnaire, and whether they would be happy for their GP to disclose details about their medical history, treatment and use of services.

Practitioners and patients were assured that all questionnaires would be returned to the study office using a study number, and without the patient's name or address.

GPs who did not respond to initial mailings were sent one reminder letter after three weeks. The study administrator or nurse (the latter being the designated contact person for GPs and patients) telephoned practices if no response was received to the initial GP letter after a reminder.

When a patient agreed to allow the GP to divulge medical details, a medical questionnaire was sent to the GP. The GP was requested to confirm with the patient personally that they were content for him/her to release details to the research team since there was not to be a signed consent.

People with gender identity issues were also contacted through self-help groups and internet sites (eg the Gender Trust, Beaumont Society, Mermaids, the Looking Glass Society, Transsexual Women's Resource, Press for Change, Yahoo transgender groups, beginninglife.com/tg/, Highland LGBT Forum, Stonewall, Healthy Living Centre and Flags Forth Valley. The relevant websites were offered a link to the study website, from which forms were available for downloading and printing. No attempt was made to contact the participant's GP when individuals submitted questionnaires downloaded from the internet or obtained through self-help groups.

Two databases were created. The first was held in the study office at the Sandyford Initiative Sexual Health Service, and held the names and addresses of GPs together with data allowing the study team to track questionnaires. Questionnaires from patients and GPs containing only study numbers, year of birth and postcode sector as identifiers were stored in the study office until they were passed to the Robertson Centre for Biostatistics for data entry using a second database.

People recruited through self-help groups and websites were able to send completed questionnaires to the study office using Freepost.

Research Tools

The Participant Questionnaires

We used four versions of the participant questionnaires. One pair of questionnaires was for patients recruited via GPs and the other pair for participants recruited through the internet and support groups. One questionnaire in each pair was for people born male (referred to as MtF) and one for people born female (referred to as FtM)^a.

The questionnaires were based on the NHS Health Technology Assessment Program guidelines for the evaluation of patient based outcome measures¹¹ and the collective knowledge and expertise of the study team in the area of gender dysphoria. This self-assessment instrument was guided by eight principles: appropriateness, reliability, validity, responsiveness, precision, interpretability, acceptability and feasibility. The patient questionnaire included questions on the following items:

- Diagnostic questions based on DSM-IV (the US psychiatric diagnostic manual) criteria for gender identity problems
- History of hormonal, surgical, psychological, psychiatric and counselling treatments
- Employment status and legal problems
- Questions about problems and positive experiences at work, with family, friends and society generally.
- The SCL-90R¹² is a widely used psychometrically sound self-report measure of psychopathology with alpha and test-retest coefficients in the .80 to .90 range for subscales. It comprises 9 main symptom dimensions e.g. anxiety, interpersonal sensitivity, etc which provide a profile of psychiatric symptoms and three global scores which indicate overall self-reported psychopathology. In addition it indicates psychiatric "caseness" (a level of symptoms which would be considered to be of clinical significance). It has been previously used in large samples of appropriate comparison groups: controls, psychiatric outpatients and sexually dysfunctional patients¹² and gender dysphoric patients of either sex from varying countries, including the UK^{13;14}.
- Ouestions on alcohol and substance use
- Questions on sexual orientation

- The Bem Sex Role Inventory is a measure of gender role orientation i.e. the extent to which a person perceives that they have the personal characteristic which are culturally attributed to one gender or another¹⁵. Though designed for an American population its short form has proven to have fair psychometric properties with a Scottish sample, for both the masculinity (alpha 0.87 to 0.89) and femininity (alpha 0.75 to 0.84) subscales¹⁶. This scale gives an indication of identification with sex role stereotypes and has been used extensively in research with both pre and post-operative transsexual patients⁷.

- The Lindgren-Pauly body image scale¹⁷

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^a **Use of language.** MtF and FtM have been used to denote respondents who were described as male and female respectively on their original birth certificates. Although the study team appreciate that these terms can be problematic to some people, we considered that the terms were the best way to describe the whole spectrum of gender variation including respondents who had and had not transitioned, and indeed might never do so. We have used the term post-operative to include any respondent who had had any form of gender-related surgery.

- The Blanchard pure autogynephilia scale. This measure was developed to indicate the degree to which a biological male is sexually aroused by fantasising that they possess female body parts or female reproductive functions (such as menstruation). Autogynephilia is conceptually and empirically distinct from 'gender identity disorder' and, though highly controversial^b, of growing theoretical importance in the development of transsexual typologies. Comprising 8 items we chose items 1 and 8 to provide a shortened form of this scale¹⁸. The full scale is reliable (alpha .95) and under factor analysis both items 1 and 8 loaded highly (r = .87 and r = .59 respectively) with the core autogynephilia factor, with a high proportion of transpeople endorsing both items, (54 % and 66% respectively). This instrument was developed for biologically male gender patients; we included versions of items 1 and 8 for people born either male or female.
- A postoperative satisfaction scale¹⁹ (completed where relevant)
- A questionnaire about satisfaction with treatment (including access to information and services) generally
- Questions seeking reasons (if applicable) for discontinuing clinic attendance
- As a result of their "epidemiological invisibility," quality of life issues for people with gender dysphoria have been poorly addressed in the medical and sociological literature¹⁰. The Short Form-36 (SF36 v2) is a popular generic health-related quality of life (QoL) instrument. It has sound psychometric properties, has been used to describe quality of life in patients suffering from various diseases and is considered superior to many "quality of life" scales²⁰. It provides a profile of QoL for 8 different domains including both physical and mental aspects of QoL. A recent study has provided norms for the UK²¹. Though not previously used among people with gender identity problems, extensive research has been conducted in the areas of aesthetic and low priority plastic surgery²².

Analysis

Given the relatively small numbers in each group, statistical analysis was restricted to descriptive methods. Continuous quantitative data are summarised as the mean and standard deviation (SD) or other appropriate statistics as indicated; subgroups of patients are compared using the Wilcoxon Rank Sum Test. Categorical variables are summarised as the number and percentage of patients falling into categories as indicated; subgroups of patients are compared using Fishers Exact Test. Qualitative data were allocated to broad themes and are presented thematically.

RESULTS.

Response rates.

Letters were sent to all 1061 Scottish practices. The number of patients identified by the GPs is presented in figure 1 below.

^b See the websites http://www.annelawrence.com/sexualityindex.html and http://www.tsroadmap.com/info/bailey-blanchard-lawrence.html

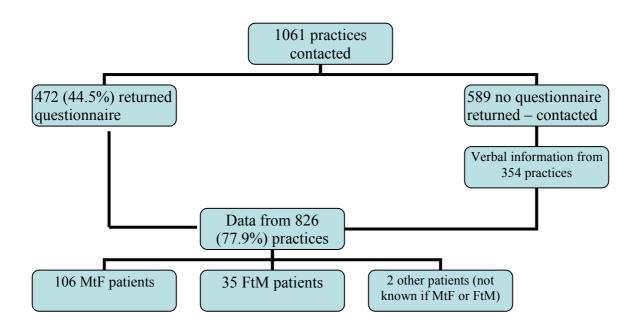


Figure 1. Responses from GPs.

Basic data are available for 148 of the 150 patients identified by the practices. These are tabulated below.

MtF patients							
	Not had treatment	Had counselling only	Had hormone therapy	Post-operative			
Number of patients	42	18	16	38			
Mean (range) age	45 (19-70)	44 (22-70)	41 (19-56)	46 (20-76)			
GP willing to pass on patient questionnaire	29	19	21	38			
Questionnaire sent to patient	24	18	19	37			
Questionnaire returned by patient	2	2	7	13			

FtM patients								
	Not had treatment	Had counselling only	Had hormone therapy	Post-operative				
Number of patients	7	3	3	21				
Mean (range) age	35 (20-65)	24 (20-31)	33 (22-43)	38 (20-84)				
GP willing to pass on patient questionnaire	7	2	2	21				
Questionnaire sent to patient	7	2	2	21				
Questionnaire returned by patient	0	0	0	6				

GP respondents also reported on two deceased patients, both MtF, one of whom (pre-operative) had committed suicide in her 40s and one of whom (postoperative) died of vascular disease in her late 50s.

Seventeen of the patients who responded to the questionnaire gave permission for their GP to be contacted for medical details, but only two GP questionnaires were received. The data are therefore not reported here.

Two questionnaires were received from the study internet site and 20 through support groups.

A total of 52 questionnaires could be analysed: 24 MtF patients and six FtM patients recruited by GPs, 13 MtF and seven FtM participants were recruited through support groups (including the Sandyford), and two MtF responded via the internet. For simplicity, responses from participants recruited through the internet and through support groups are combined.

Responses to the participant questionnaires.

In most cases, results are presented separately for MtF and FtM respondents. Results are generally presented for the combined figures for questionnaires distributed through the internet, support groups and GPs.

Basic demographics.

The deprivation category of residence of respondents roughly corresponds to those found in Scotland as a whole. There were 4 respondents from the South of Scotland, 5 from the Highlands and Islands, 4 from the North East and the rest lived in the central belt.

The mean age of respondents was mid-40s, although non-GP-recruited FtM respondents were, on average, significantly younger (mean 33 years). About half of the respondents live alone, most of the remainder living with a partner and/or children. None of the FtM respondents had ever been married or had children, while about 2/3 of the MtF respondents had been married, and over half had had children.

Some research has suggested that a higher proportion of the MtF population than the rest of the population have older brothers. This finding has not been replicated in our sample -16/33 MtF (and 5/12 FtM) respondents reported having had older brothers.

Gender identity – diagnostic questions

Participants were asked if they had a desire to live and be accepted as a member of the sex opposite to that given on the birth certificate, usually accompanied by a sense of discomfort with, or inappropriateness of, one's anatomic sex and a wish to have hormonal treatment and surgery to make one's body as similar as possible to the preferred sex. If respondents had had medical or surgical treatment for gender issues, they were asked to tell us how they felt before treatment.

All 50 respondents agreed with this statement, suggesting that they fell within the standard diagnostic criteria for "classical" transsexualism or "gender identity disorder". More detailed questions confirmed that there were few mixed feelings about the preferred gender identity. The MtF respondents stated that they had begun to feel this way when they were, on average, 11½ years old, while the FtM respondents said they were about six years old when they began to experience gender dysphoria. There was, however, a wide variation around the average age of onset.

Gender roles and appearance

Most respondents (41/50) had transitioned and were living full time in the gender of their choice. Only nine respondents (eight MtF) had not transitioned. It appears that three of these respondents (all MtF) only lived in female role in private and alone, while the remainder spent most of the time in the gender role of their choice.

When asked to rate, on a scale of 0-100, how content respondents felt with their appearance, average scores were 72% for MtF respondents and 84% for FtMs. Asked to rate how difficult it was for others to detect their birth gender, MtFs gave scores of 51/100 and FtMs 82/100.

Six FtMs gave reasons for how others might detect their birth sex: four mentioned high vocal pitch, two height/small build, two small hands and feet, and one mentioned wide hips. Thirty nine of the MtF respondents described reasons for detection: ten mentioned beard growth, 16 mentioned voice, 11 facial features, 12 height or general build, five mentioned the size of their hands and feet, four mentioned mannerisms, three deportment, three anxiety or lack of confidence and two the presence of an Adam's apple. Eight other reasons for being detected were mentioned by individual respondents. Three MtF respondents stated that they were not interested in "passing" as female, at least at times.

Sexual orientation and intimate relationships

Of the 38 MtF respondents, 12 reported being mainly attracted to women, 10 to men, eight to both and eight to neither. Seven of the 12 FtM respondents were mainly attracted to women, four to men and one to neither. 18/38 MtF and 4/11 FtM respondents reported a change in their sexual orientation over time. Twenty six respondents gave accounts of what had changed for them. In general the reasons for changes in sexual orientation over time were diverse. Changes were mainly related to experiences and perceptions through the process of transitioning. Some respondents felt that transitioning and being comfortable with their gender allowed them to express their sexuality more freely.

"Used to be attracted to only females, but I'm very liberal now and feel secure enough now in my male identity to have the occasional same sex experience..." (FtM)

Other accounts show that some respondents previously had no sexual attraction to anyone and now experience sexual attraction since transitioning and vice versa.

"Until after having started treatment I was attracted to neither sex ever" (MtF)

"Sexual attraction has disappeared with age and my sexual arousal has disappeared presently hormonally linked. If it is restored I would perhaps be attracted to men but I don't know for certain" (MtF)

Some respondents' accounts of what had changed show that their sexual orientation is an ever changing, growing and maturing part of their identity and that time and experience can change how sexuality is defined.

"I see sexuality and gender as potentially fluid over ones lifespan. So far my sexuality has matured with my identity including gender transition body image" (FtM)

"I began life as a straight (heterosexual) man then identified as a bisexual man gay man straight (heterosexual) woman lesbian and finally (or at least currently) as a bisexual gender queer with a strong femme identity" (MtF)

17/39 MtF respondents stated that they had sexual contact with females, five with males, two with both sexes and 15 with neither. The corresponding figures for the FtM participants were 6/11, 4/11, 0/11 and 1/11. 13/38 of the MtF respondents and 5/10 FtM respondents reported a change in their sexual activities over time. Among those respondents who elaborated on the changes, the FtM group generally described being more comfortable with relationships with both sexes, whereas most of the MtF respondents described reduced levels of sexual contact generally.

Respondents were asked to rate the importance of an active sex life on a scale of 0-100. The MtF group gave a mean score of 46, while the FtM group gave a mean score of 77. When asked about whether they had had a satisfactory sex life, the MtF group scored 28/100 and the FtM group 51/100. Respondents rated the importance of having a satisfactory sex life in future more highly: 52/100 for the MtF group and 84/100 for the FtM participants.

The additional comments by respondents show that, in general, the reasons for changes in sexual contact over time were diverse. Changes were mainly related to experiences and perceptions through the process of transitioning. Some respondents felt that transitioning and being comfortable with their gender allowed them to express themselves sexually.

"Sex has always been important to me but I had very few sexual outlets when I was younger because I could never relate to women as a woman myself and couldn't have a satisfactory relationship with men as a woman either. I enjoy sex much more now" (FtM)

Some of the respondents reported having no interest, or very little interest, in having sex and some had never had sex at all.

"I have never had sex" (MtF)

"I have never had a sex life and don't know about the future" (FtM)

"Sex to me was always about pleasing my partner. I'm single now and don't really miss it. If I have a partner in future I'll try to keep him or her satisfied" (MtF)

The changes in sexual contact for some respondents were related to how sexual orientation is defined in relation to gender identity.

"...I was heterosexual male in sexual orientation and haven't changed since starting hormonal treatment making me now lesbian female I suppose..." (MtF)

"I now find myself in a lesbian relationship with a straight woman" (MtF)

Sexual relationships and transition

Before disclosure of gender problems, MtFs had had an average of 2.2 female and 0.5 male partners. FtM respondents reported having had a mean of 3.2 female and 1.8 male partners. Levels of satisfaction with sexual activity were low before disclosure (29% for MtF and 35% for FtM respondents). The number of partners fell somewhat after disclosure of gender issues but before treatment (MtF mean 1.4 female partners, 0.8 male partners, FtM 0.7 male partners, 2.6 female partners) and levels of satisfaction remained low.

During gender treatment but before surgery, the mean number of sexual partners fell still further in all categories, while sexual satisfaction also remained low. Following surgery, levels of sexual activity remained very low in the MtF group (mean 0.4 female partners, 1.0 male partners) while there was a higher level of sexual activity among the FtM respondents (mean 6.2 female partners, 2.5 male partners). Satisfaction with sexual activity was nevertheless high for both groups postoperatively (MtF 55% and FtM 88%), although there was a very wide range of experience:

"Not of any interest" (MtF)

"Despite some enduring problems around intimacy meaningful sexual relationship appears more achievable" (MtF)

"It has slowly improved until now it is great and I have no inhibitions anymore. I no longer mind anyone seeing me naked in fact I like being naked I feel as if I have been set free from a prison. I felt at peace with myself after surgery" (FtM)

Other aspects of sexuality

The majority of participants (29/46) denied having worn clothes of the sex opposite to that on the birth certificate part time simply in order to enjoy the temporary experience of membership of the opposite sex, but without any desire for a more permanent sex change or associated surgical reassignment, and with no associated sexual excitement.

Participants were also asked about "fetishistic" cross dressing - the wearing of clothes of the opposite sex principally to obtain sexual excitement. Only 8/45 (6 MtF) respondents stated they had had this experience.

Autogynephilia is a term coined by Blanchard to describe the erotic attraction to the feminised self¹⁸. The phenomenon has not been described among FtM population and we asked similar questions of MtF and FtM participants:

"Have you ever been sexually aroused picturing yourself with nude male/female body?" 17/36 (47%) MtF and 1/8 (12%) FtM respondents agreed with this statement.

"Have you ever been sexually aroused by the thought of being a man/woman?" 21/36 (58%) MtF and 1/9 (11%) FtM respondents agreed. Those responding positively to this question included all those who had reported sexual arousal picturing themselves with a nude body of the gender of choice, with a single MtF exception. The proportions of positive responses from MtF and FtM participants were significantly statistically different.

Interestingly, MtF respondents attracted to females were less likely to report autogynephilia than those who were sexually attracted to males.

Sexually transmitted infections

The rate of sexually transmitted infections (STIs) appears to be low. Only 3/36 MtF participants and none of the 13 FtM respondents had had sexually transmitted infections before treatment. One participant described infections in the pre-operative phase (FtM with herpes-like symptoms who declined medical examination and self-treated with herbs), and postoperatively one MtF reported thrush and one FtM participant reported having had scabies.

Work and education

Among the FtM respondents, one had retired, four were students, two reported being unable to work because of disability (psychiatric and physical) and six reported working in a wide range of jobs. Among the MtF participants, two had retired, three were students (one of them a part-time cleaner and barmaid), eight were unable to work because of disability (psychiatric and physical), two were unemployed, one was a carer for her mother and 22 worked in a very wide range of jobs and professions.

Nine of 33 MtF and 4/10 FtM respondents stated that they had not told any work or college colleagues about their gender issues. Similar proportions reported that colleagues were aware of their gender issues. Among those who described who had been told, roughly equal numbers said they had told either everyone at their workplace, close colleagues only, or management only.

While 5/11 FtM and 15/31 MtF respondents reported no problems in the workplace, but others had clearly experienced major difficulties:

"Courses in (*colleges*) need to employ lecturers who are not transphobic and not to cover up for them" (MtF)

Other difficulties included harassment (3), isolation (4) and problems with access to toilets (4). One MtF respondent reported being unable to return to a managerial position after transition.

There were also positive experiences in the workplace. Fourteen MtF respondents reported understanding, sympathy and support from their colleagues, while only three reported no positive experiences. The FtM respondents seemed to have more problems - 5/11 reported no positive experiences, while only two described getting support. A further three FtM respondents, however, described a sense of satisfaction with their transition in the workplace.

Family

7/13 FtM respondents stated that all their family knew of their gender issues, 5/13 reported that just close family knew, while one stated none of the family knew. For the MtF respondents the corresponding figures were 22/37, 11 and two. In addition, two reported that only their wife knew.

Major family problems were reported by the majority of respondents – only six MtF and no FtM participants reported having had no problems. Complete disruption of all family ties was reported by 3/13 FtM and 4/33 MtF respondents. All the other respondents reported major difficulties with at least some family members – although in some cases these difficulties had resolved over time. Two respondents (one MtF and one FtM) had been physically attacked or received death threats from family members.

Although a substantial number of respondents (1/13 FtM and 10/34 MtF) reported no good experiences within the family, most did describe at least some positive and supportive family relationships.

Friends

Most respondents (22/38 MtF and 7/12 FtM) reported having friends of both genders, and most of the remainder said that most of their friends were the same sex as their own chosen gender. The majority of respondents said that this had always been the case – but several respondents said they found it easier to make friends since transition. Some MtF respondents reported a shift towards a higher proportion of female friends since transition. The vast majority of respondents (34/37 MtF and 12/13 FtM) reported that friends were aware of their gender issues.

Several respondents reported problems with friends. While only one FtM respondent reported a persistent problem in a friendship, many of the MtF participants had clearly lost most or all of their pre-transition friends – although clearly some had made new friends. The vast majority of respondents reported on positive aspects of their relationships with friends.

People in general – and aggression

"I don't think trans people have issues with gender as much as the rest of society has. Our society has a very limited idea of what a man is and what a woman is and trans people know its not so binary in reality" (FtM)

"The form has mentioned your gender issues almost 40 times. I do not consider myself to have any gender issues- any gender issues I come into contact with are ones other people have" (MtF)

"Perhaps the most important aspect for me and possibly other male to female and female to male transsexuals are about the social consequences of gender fitting in and being/ feeling part of a relationship, a community, a society" (MtF)

The majority of respondents (23/38 MtF and 7/12 FtM) had experienced problems with people in general. Problems included being bullied at school, difficulties in sexual encounters, shyness,

generally understanding gender roles, dealing with the embarrassment of others, others thinking they were sexually deviant, being refused service in pubs, vandalism to property.

"In my opinion one of the biggest hurdles facing transgender people is the general public's ignorance to the fact that I am not a bloke/male ... A lot of people think transvestites are the same as me and vice versa ... I don't cross dress" (MtF)

Most (23/36 MtF and 7/13 FtM) also reported on positive experiences with people in general. These experiences ranged from pleasure at being accepted, to finding that relationships were more open and truthful, being treated with more respect (one FtM) and being admired for having courage.

"I have tried and largely succeeded to continue with an everyday regular type of life. I have had no adverse reaction from anyone be it in shops, pubs, work etc and for that I feel very fortunate. This is probably not typical. I try to dress conservatively and not draw attention to myself and so far so good. Overall I know my limitations and suspect that most people would be able to tell that I am a transsexual. However I don't take myself too seriously, am able to laugh at myself and more importantly am completely open to anyone who asks" (MtF)

Most respondents (26/37 MtF and 7/13 FtM) had experienced verbal aggression, most commonly from teenagers in the street. Many respondents (23/37 MtF and 6/12 FtM) had also experienced threats, largely from strangers - particularly teenagers. There were also reports of physical aggression – from 13/38 MtF and 3/13 FtM respondents. Assaults were both physical and sexual, and had been committed by acquaintances, neighbours and strangers.

Police and the law

Several respondents (11/28 MtF and 2/7 FtM) had contacted the police because of gender issues – generally in relation to transphobic attacks.

Most respondents (32/38 MtF and all 13 FtM) had had no problems with the police. There were six cases however where gender issues caused major difficulties – one respondent had been arrested several times for cross dressing, another reported being sexually harassed by an officer, and two described insensitivity by officers during investigation of assault (one of these a sexual assault). In two other cases the police were accused of inactivity in situations of aggression towards respondents. More commonly (12/38 MtF and 3/12 FtM), respondents reported having received positive help from the police. In three cases this involved substantial support, well beyond the normal range of help offered by a police service.

Sex work

Only one respondent (FtM) reported having been involved in commercial sex work. This participant reported that, for a brief period as a teenager, he could only manage the distress of being expected to be a normal female through a form of "compensation" involving making men pay for sex.

Mental health

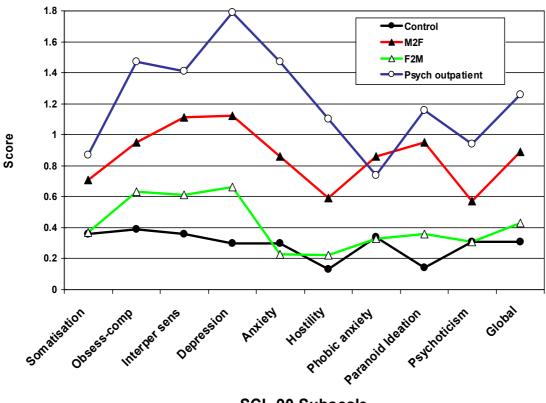
Prior to disclosing their gender issues, most respondents (32/35 MtF and all 9 FtM) reported emotional problems other than those directly related to their gender. While there were clearly a number of people with multiple and major psychological difficulties, specific problems mentioned included depression and/or suicidal thoughts (19 people), anxiety and/or social withdrawal (12), self harm (2), drug and alcohol problems (2), memory problems (1), "moodiness" (2), obsessional neurosis (1), post-traumatic stress disorder (1) and a dissociative state (1). Several respondents described major problems in childhood:

"From the age of 6-7 years old I wanted to be female. This stress made me very sickly and I was not learning properly at school ... At the time I used to put elastic bands round my scrotum genitalia hoping it would drop off to stop my voice from breaking later. At the age of 11 I had to cross dress but didn't understand any of it other than me wishing to be a girl" (MtF)

Participants were asked to complete the Scl90 questionnaire, which gives a reasonably sound indication of current mental state. The results are tabulated below, together with some comparison figures from the research literature.

		M2F (N=39)	F2M (N=13)	US population ¹²	US psychiatric outpatients ¹²	$\mathrm{MtF}^{\mathrm{I}3}$	Norwegian FtM ¹³ (N=35)
Somatisation	Mean (SD)	0.71 (0.86)	0.37 (0.49)	0.36 (0.42)	0.87 (0.75)	0.53 (0.50)	0.76 (0.77)
Obsessive-Compulsive	Mean (SD)	0.95 (0.84)	0.63 (0.78)	0.39 (0.45)	1.47 (0.91)	0.65 (0.59)	0.69 (0.67)
Interpersonal Sensitivity	Mean (SD)	1.11 (0.98)	0.61 (0.68)	0.29 (0.39)	1.41 (0.89)	0.68 (0.63)	0.82 (0.72)
Depression	Mean (SD)	1.12 (1.00)	0.66 (0.59)	0.36 (0.44)	1.79 (0.94)	0.72 (0.73)	0.77 (0.68)
Anxiety	Mean (SD)	0.86 (0.94)	0.23 (0.45)	0.30 (0.37)	1.47 (0.88)	0.53 (0.49)	0.67 (0.72)
Hostility	Mean (SD)	0.59 (0.72)	0.22 (0.46)	0.30 (0.40)	1.10 (0.93)	0.33 (0.34)	0.45 (0.56)
Phobic Anxiety	Mean (SD)	0.86 (0.96)	0.33 (0.44)	0.13 (0.31)	0.74 (0.80)	0.35 (0.61)	0.61 (0.86)
Paranoid Ideation	Mean (SD)	0.95 (0.85)	0.36 (0.47)	0.34 (0.44)	1.16 (0.92)	0.53 (0.67)	0.76 (0.65)
Psychoticism	Mean (SD)	0.57 (0.54)	0.31 (0.53)	0.14 (0.25)	0.94 (0.70)	0.43 (0.40)	0.42 (0.47)
Global Severity Index	Mean (SD)	0.89 (0.76)	0.43 (0.44)	0.31 (0.31)	1.26 (0.68)	0.56 (0.45)	0.67 (0.57)
Positive Symptom Distress Index	Mean (SD)	1.90 (0.62)	1.43 (0.54)	1.32 (0.42)	2.14 (0.58)	-	-
Positive Symptom Total	Mean (SD)	37.2 (23.5)	22.8 (17.6)	19.29 (15.48)	50.17 (18.98)	-	-

These figures are represented graphically in the figure below.



SCL-90 Subscale

The MtF respondents scored higher than FtM respondents on all sub-scales – suggesting that the MtF respondents have significantly more psychological difficulties. The MtF respondents had high degrees of psychological distress as suggested by their scores lying in the same range as US psychiatric outpatients. FtM respondents, however, had scores more closely similar to population norms.

Post-operative respondents had lower scores on all scales than pre-operative respondents, although these scores only reached statistical significance for the hostility and psychoticism scales. This suggests that, in this sample, operative intervention may have improved mental health. The qualitative data presented below tend to support this view. Interestingly MtF respondents with autogynephilia (those responding positively to the question about whether they had experienced sexual arousal when thinking about themselves with a nude female body) also scored uniformly lower on all scales than the non-autogynephile respondents, although statistical significance was only obtained on the somatisation scale.

One participant was clearly currently extremely distressed and asked the study team for help:

"A strong feeling that I need some sort of psychiatric help. I would appreciate being contacted" (MtF)

Prescribed and non-prescribed drugs

Most respondents (MtF 20/35, FtM 8/21) had used drugs for psychiatric problems, most commonly antidepressants and medication for anxiety (diazepam, propranolol).

Among the 39 MtF respondents, 13 had never smoked, 11 were ex-smokers and 15 were current smokers. Corresponding figures for the FtM respondents were nine, two and five.

A history of illicit drug use was relatively common – particularly cannabis (MtF 12/39, FtM 7/13). Current use was however much less so (3/39 MtF and 1/13 FtM within the past year). Other drugs that had been used in the past by more than one respondent included magic mushrooms (MtF 6), temazepam (MtF 2, FtM 2), diazepam/Valium (MtF 4, FtM 1), amphetamines (MtF 4, FtM 1), LSD (MtF 6, FtM 2), ecstasy (MtF 1, FtM 2), nitrates (MtF 5, FtM 1), cocaine (MtF 2, FtM 1) and non-heroin opiates (MtF 6, FtM 2). It is likely that painkillers account for most of the opiate use referred to. Current use of illicit drugs was extremely uncommon in all groups.

Self harm

Many respondents reported a history of self-harm. Among the MtF respondents, 18/39 had self harmed, most commonly by taking overdoses of pills. Seven were currently self-harming (ie within the past year), most commonly by scratching, hitting or burning. A similarly high proportion - 7/13 - of the FtM respondents had self-harmed, most commonly by cutting or scratching, but none reported current self-harm.

Gender transition and treatments

26/37 MtF participants had completed real life experience as females, for a mean of 2 years. 12/17 stated that they had had surgery after the real life test and none had reverted to their birth gender. Among the FtM respondents, 9/11 had had real life experience as males, with 7/9 going on to have surgery and again, none had reverted to their birth gender.

Surgery for FtMs

Twelve respondents had had mastectomies – four in the NHS, four privately in the UK and two abroad. Satisfaction scores varied widely but averaged 74% - comments included two patients who required two operations because insufficient tissue had been removed and both were left with prominent scars. Another participant was also very conscious of prominent scars. A further respondent had no major complaints but noted reduced sensation post-operatively

Four out of ten FtM respondents reported having had hysterectomies as an element in the treatment of their gender problems. In three cases the treatment was performed in the NHS and in one case abroad. The average satisfaction rating for the procedure was 99%, and the only negative comment was that the participant had to be put in a side room of a female ward where not all staff were aware of the patient's gender identity.

Two participants had had phalloplasty, both under NHS care, at ages 67 and 50 years. Satisfaction was 50% in one case (who is having difficulties with passing urine because of strictures) and 100% in the other (who is still undergoing the procedures). One patient had undergone a partial metoidoplasty (creation of a small penis using clitoral tissue) at the age of 50 years, in the NHS. He reported 90% satisfaction with this procedure, and was able to urinate while standing. Respondents were otherwise generally very happy with hospital care and genital appearance post-operatively, but less satisfied with penile reconstruction and function. Three respondents commented that they did not wish phalloplasty because they were able to pass as male without it, and surgical results are less than satisfactory.

Six of eight participants expressed no regret about having had sex reassignment surgery, while one had had transient regrets and another had "slight" regrets. There was general agreement that surgery had improved participants' quality of life.

Four participants reported sexual activity with women post-operatively. Three reported achieving orgasm, but only two had achieved penetrative intercourse. Three reported having had sex with men, and two of them had achieved orgasm.

Surgery for MtFs

Thirteen participants reported having had a vaginoplasty or more comprehensive sex reassignment surgery, 11 in the NHS, one privately in the UK and one in Thailand. The mean satisfaction score

was 86%. Respondents were generally very happy with hospital care and vulval appearance and urethral function post-operatively, but less satisfied on average with vaginal and clitoral function. One participant was disappointed not to have sensation in the neoclitoris and another reported discomfort on vaginal dilatation. No participants reported having had "cosmetic" genital surgery and none had had orchidectomy except as part of sex reassignment surgery. Three participants nevertheless thought that limited surgery might have been better. No participant expressed any regret about having had sex reassignment surgery and there was strong agreement that quality of life had improved since surgery.

Five participants reported having had sex with men since surgery. Penetration was reported in three cases, one of whom had achieved orgasm. Two others had achieved orgasm by other means. Four MtF respondents had had sex with women since surgery, three of them reporting having achieved orgasm.

A total of 4/15 respondents reported having had breast implants – one in the NHS, and two privately. The mean satisfaction score was 90%, although one participant reported having to have a second very satisfactory procedure after the first resulted in infection.

Two MtF patients had had rhinoplasty, one under NHS care and one in Thailand, at a mean age of 47 years. Satisfaction levels averaged 81% - the main problem for the more dissatisfied respondent being constant running of the nose. Three reported having had upper lip surgery (two under NHS care, one abroad). Satisfaction levels were again high, averaging 91%. None reported having had brow or eyelid surgery, although one MtF participant wished that this had been offered. Only one (MtF) respondent reported having had a facelift at the age of 49 years, in the NHS. The participant reported 92% satisfaction with the procedure. One MtF participant wished that this procedure had been offered to her.

No participants reported having had voice surgery and only one reported having had a tracheal shave (to reduce the Adam's apple). This respondent had the procedure carried out in the NHS at the age of 44 years, and reported 85% satisfaction with the result.

Hormonal treatments

30/37 MtF and 10/12 FtM respondents had had hormone treatments.

The FtM group reported only using testosterone, generally in injectable form. Side effects reported included high blood pressure, erratic menstrual bleeding, mood swings, aggression and acne

The MtF group had used a wider variety of hormonal preparations. All 30 who had had hormonal therapy had used oestrogens, generally taken orally. Side effects were rarely reported but included mood swings, forgetfulness, swollen ankles and nausea. Progesterone and progestagens (generally Provera) had been used by 12 participants, who reported weight gain, acne, flushes/sweating and lack of concentration. Eleven MtF respondents had used anti-androgens (cyproterone, spironolactone, finasteride) and no side effects were reported.

Body Image.

Participants were asked about their feelings about their bodies. The Lindgren-Pauly Body Image Scale asks people to rate their satisfaction with their primary sexual characteristics (genital organs), their secondary sexual characteristics (those affected by hormones) and neutral characteristics. The table below summarises the responses:

		M2F Pre-op	M2F Post-op	F2M Pre-op	F2M Post-op	M2F=F2M	Pre-op=Post-op
Primary sexual Characteristics	N Mean (SD)	20 4.3 (0.5)	19 3.3 (0.7)	1 4.6 (-)	12 2.8 (0.8)	p=0.0051	p<0.0001

Secondary sexual Characteristics	N Mean (SD)	20 3.1 (0.5)	19 2.8 (0.7)	1 2.9 (-)	12 2.5 (0.7)	p=0.16	p=0.010
Neutral Characteristics	N Mean (SD)	20 3.0 (0.5)	19 2.6 (0.8)	1 2.2 (-)	12 2.2 (0.6)	p=0.0026	p=0.0085

We can see that satisfaction with primary, secondary and neutral characteristics was significantly higher (lower scores) for the post-operative groups, and was generally higher for the FtM than the MtF respondents.

Gender roles

The Bem sex-role inventory assesses the extent to which a person perceives that they have the personal characteristics which are culturally attributed to one gender or another. Scores on the masculinity scale averaged 4.2 for the FtM respondents and 4.1 for the MtF respondents. Average scores on the femininity scale were 5.1 and 5.5 respectively.

General health-related quality of life

The SF-36 questionnaire is a widely used scale designed to investigate physical and mental health. Specific items for enquiry include physical functioning, physical role, bodily pain, general health, vitality, social functioning, emotional state related to role, and mental health. The average scores of both FtM and MtF respondents were not significantly different from the population as a whole, but MtF respondents scored statistically significantly lower than average scores on the social functioning scale, role emotional and mental health scales.

When asked whether they suffered from emotional or physical problems now, 18/36 (50%) of MtF and 8/11 (73%) FtM respondents wrote that they did. The most common reported problems were anxiety and depression (11 participants), poor self-image and lack of confidence. Several respondents described a variety of physical problems, none of which were obviously gender-related.

Participants were asked if they had had any change in their physical or emotional state since disclosing their gender issues. The vast majority of (35/38 MtF and all 13 FtM) respondents had experienced change – in every case towards greater happiness and contentment and in some to greater physical wellbeing. Similar responses resulted when participants were asked about changes in their condition following contact with clinical services, although one MtF respondent reported anxiety about proceeding with gender transition.

Use of services.

General practice

Most respondents (MtF 34/37, 10/11 FtM) had used clinical services since recognising their gender issues. Most (MtF 21/39, FtM 10/13) had consulted with their GP, and most reported being comfortable discussing gender issues with their GP (MtF 28/31, FtM 9/11). Satisfaction with GP services was moderate (mean (SD) VAS satisfaction scores: MtF 76 (27)%, FtM 64 (26)%). Predictably, reported satisfaction was higher among the participants who obtained their questionnaires from their GPs. Comments on GP services were generally positive:

"My GPs have given me the best support and help. My GP nurse and counsellor I can't thank enough" (MtF)

"When I went on to hormone treatment last year I felt I was doing so well & had taken such a big step in my life with the help of my GP who has been so understanding & supportive" (MtF)

Four participants nevertheless commented that their GP was knew little or nothing about their problems, while a further four found their GP unhelpful or worse:

"Doctors seem to know very little about my condition and they admit their ignorance. It's up to the TS patient to research surgery etc and ask for what you want" (FtM)

"Had no knowledge whatsoever about gender issues + no idea where to send me. Initially refused to refer me to a clinic so I referred myself" (MtF)

Psychiatry

15/38 MtF and 7/13 FtM respondents had consulted a psychiatrist. All apart from two MtF respondents had felt comfortable discussing gender issues with their psychiatrist, and levels of satisfaction were moderate (mean (SD): MtF 64 (31)%, FtM 75 (18)%). Psychiatric services were generally referred to as a means to obtain gender related therapy and there were only five reports of other aspects related to counselling or dealing with depression. Comments about the psychiatric services were generally positive, although four respondents complained about waiting lists and long intervals between appointments. One FtM participant complained about not being able to get an NHS prescription for testosterone. Five patients had clearly had unsatisfactory relationships with their psychiatrists:

"Slow I felt the psychiatrist had very fixed ideas about what a man is like and what a woman is like" (FtM)

"Insulting, predatory, aggressive and upsetting. The psychiatrist was one of the worst experiences of treatment I've had" (MtF)

"Unsatisfactory" (MtF)

"Patchy relationship with consultants" (MtF)

"Psychiatrists never gave me much help. I felt angry that my condition was seen as a mental problem anyway - it was physical and I just wanted surgery etc. Felt visits were a waste of time and have not seen one in years" (FtM)

Psychology

Only 6/39 MtF and 2/13 FtM participants had seen a clinical psychologist. As with psychiatry, most participants described their clinical contact more in terms of the process of gender identity change than in terms of therapy. Comments were generally positive, but one respondent complained that his psychologist was not experienced in dealing with gender issues and one clearly found the contact unpleasant.

Speech therapy

17/39 MtF and none of the FtM respondents had seen a speech therapist. All except one had felt comfortable discussing gender issues with the therapist and satisfaction ratings were high (mean (SD): 70 (25)%). Comments were generally extremely positive although one participant said that she had not felt calm enough to benefit, and another felt that therapy had not helped much.

Gynaecology

Two FtM and two MtF respondents had consulted gynaecologists. One FtM participant reported feeling very uncomfortable having to attend a clinic with women and another stated the (male) gynaecologist did not seem to want to see him as male.

Urology

Two MtF and one FtM participant had seen urologists. Levels of satisfaction were high and comments were uniformly positive.

Gender surgery

Six MtF and six FtM respondents had attended gender surgical consultations. All apart from one MtF respondent reported feeling comfortable discussing gender issues and levels of satisfaction were extremely high ((mean (SD): MtF 86 (16)%, FtM 79 (7)%). Free text comments were uniformly positive apart from one participant who expressed dissatisfaction with post-operative follow up arrangements and one dissatisfied with his mastectomy result.

Family planning

Family planning services had been used by 4/39 MtF and 2/13 FtM respondents. All free text comments were very positive and satisfaction ratings were high (mean (SD): MtF 82 (15)%, FtM 68 (11)%).

Plastic surgery

Two MtF and three FtM participants reported on having used plastic surgery services. Respondents had felt comfortable discussing gender issues with plastic surgeons and levels of satisfaction were high (mean (SD): 63 (14)%).

Electrolysis

Twelve MtF respondents reported having used electrolysis. 8/12 had felt comfortable discussing gender issues with their electrolysis practitioner and satisfaction levels averaged 67% (SD 28%). One participant had stopped using the service because of pain and another sought laser hair removal. Five respondents complained about the cost of electrolysis and considered that the service should be available through the NHS – in some cases this appeared to have caused an insuperable obstacle to transition.

Laser hair removal

Nine MtF respondents had used laser hair removal. Seven of these respondents stated that they had felt comfortable discussing their gender issues and satisfaction levels averaged 54% (SD 34%). Three respondents stated that they could not afford the service. Four participants considered the treatment had been effective, one found it very painful and two thought the treatment had not worked.

Endocrinology

Five MtF and four FtM respondents reported having consulted an endocrinologist. All apart from one MtF participant had felt comfortable discussing gender issues and satisfaction levels were high, (mean (SD): MtF 73 (24)%, FtM 65 (13)%). Comments were generally positive.

Counselling and psychotherapy

Six MtF and six FtM participants reported having consulted a counsellor or psychotherapist. All apart from one MtF participant had felt comfortable discussing gender issues and levels of satisfaction were fairly high (mean (SD) MtF 66 (44)%, FtM 76 (33)%). Free text comments were generally positive, although one felt his counsellor was out of her depth and another felt dissatisfied with person centred counselling.

Services generally.

There were many positive comments about services generally.

"My doctors have been really good to me as it was a learning curve for them. Just happy the change is over and done with" (MtF)

"Everyone at the 2 local teaching hospitals psychiatric and general have been extremely supportive. I have had no traumatic experiences but I guess some of that is down to my personality which is outgoing, humorous, thick skinned" (MtF)

"Very grateful to the NHS services provided as I may otherwise have gone completely mad" (MtF)

"When I first discussed my gender confusion with a psychiatrist in the early 1970 he wanted to admit me into the local mental hospital for observation. We've come a long way" (MtF)

"My life has monumentally improved and it's largely thanks to the compassion and understanding of the professionals in this field. They steered me through the minefield and I will be eternally grateful" (MtF)

- "Overall I have been very satisfied about how my transition has been assisted by clinical services" (MtF)
- "I have been delighted with the services I have received from NHS ..." (MtF)
- "All the services were there for me and helped me immensely" (MtF)

Participants were asked about their worst experiences in the health service. Ten respondents stated that they had had no bad experiences, but eight were unhappy about waiting times, two about travelling times and two about long waiting times between appointments with little support. One patient felt that the lack of access to cosmetic clinic services was the biggest problem, and another reported her surgical complications following mammoplasty. Others complained about the attitude of clinicians:

- "Being repeatedly told by a former GP that I was mad and that everyone was laughing at me for wanting to gender change ..." (FtM)
- "My doctor refused to discuss my issues refusing to listen to my concerns and refusing to refer me to gender clinic" (MtF)
- "Still was antipathy of my first GP and getting prescription still in my male gender and male name" (MtF)
- "GPs and surgery staff refused to accept me as female they were prejudiced + there was lack of confidentiality from GPs in the practices" (MtF)
- "GP not being able to prescribe hormone treatment during rlt" (real life test) (MtF)
- "Unhelpful-my GPs reaction was to inform me that if I was admitted to hospital I would not share a ward with women I was left wondering where his attention was focused" (MtF)
- "The paediatric endocrinologist telling me age 16/17 that I could get oestrogen suppressants in a few months after a blood test to establish baseline testosterone and oestrogen levels. When puberty had already finished I didn't grow noticeably after this point and I knew testosterone was the right thing. I didn't need to 'try to see what it's like' not menstruating". (FtM)
- "The first time I was sent to an endocrinologist was at ... hospital and the endocrinologist said to me everyone has to find their own way to the devil which I thought was completely inappropriate" (FtM)
- "District nurses services. Both sisters who have attended I felt they failed to treat my health issues post operatively and I believe this is due to my gender issues but other district nurses that have attended have been very good" (MtF)
- "Being told by a junior doctor there was no point in me having a sex change. Being put in an all male ward in hospital" (MtF)
- "Ten years ago when living in ... England I went to see doctor about changing gender and was put on to a general psychiatrist who said he had known a few people who had changed gender and they looked like freaks then completely changed the subject and would not discuss it at all". (MtF)

For others, the worst problems had been institutional:

"The very worst was being admitted to a female gynaecology ward for my hysterectomy op. I was a man in male clothing and with a beard. I felt everyone was staring at me. To use the male toilets I had to cross the corridor to the male ward and use their toilet. I would not use a female toilet and had not done this for years. When I shaved in the morning other patients would stare and I know they were thinking 'why is a man in here'. Fortunately the surgeon came to his senses and had me moved". (FtM)

Being put in side room of women's ward. Stuck in room - not all staff aware" (FtM)

"Isolation within female ward" (MtF)

"The drop-in clinic at ... can be an uncomfortable experience due to not knowing consultants identity prior to being called" (MtF)

"Public waiting room during early days of cross dressing in female role" (MtF)

"Good though slight confusion about which ward to put me in hospital which annoyed me a bit" (FtM)

"It is difficult and demeaning when seeing my specialist to have to attend a sexual problems clinic situated in the obstetrics section of ..." (MtF)

Two respondents were particularly critical of the private medical sector and its motivations:

"The guy diagnoses as soon as cheques clear" (MtF)

In other cases, the problems had been about "buck passing" and poor communication between professionals:

"Getting passed back and forward between GPs, health professionals, consultants and sexual health people in the NHS for over a year after my initial diagnosis as suffering from GID and told I could start hormones but to actually get them was a problem because no one wanted to take responsibility for actually prescribing and administering the medication" (FtM)

"Probably issues related to general lack of communication between different professionals. I think a coordinator/ CPN locally would be useful. Professionals see TS people as a special interest and spend most of their time working in their own chosen speciality: eg my psychiatrist saw elderly mentally ill most of the time". (MtF)

"Letters to GP etc not being sent out promptly" (MtF)

Participants were asked if they considered that services gave them the opportunity to give their views. Twelve replied no, 19 yes and three sometimes. Two respondents said that although they knew they could make their views known they felt too inhibited to do this.

When asked if they had received accurate information from services, 13/35 MtF and 6/10 FtM respondents said they had not. A major theme expressed by several respondents was that patients have to seek information themselves using the internet and other resources – and often have to teach their professional carers. Specific and easily remediable resources which were noted as lacking were: information about genital electrolysis prior to MtF sex reassignment surgery (2 respondents), a general guide to the paths and stages people with gender issues might follow (3 respondents), lists of support groups (3), a handbook about all available treatments (3), information about possible physical causes of gender dysphoria and information for schools. One participant felt that information had been actively withheld from her:

"I've had virtually zero breast growth if I am unable or if gender specialist is unwilling to try an alternative I would like to know if augmentation can be performed for those in need of it via the NHS as it like so much else appears to be almost classified information" (MtF)

Desired services

Participants were asked if they would have liked to have used a health service concerning their gender issues but had not done so – and what had stopped them. The issues raised were lack of NHS funding for services (3 participants), lack of good local expertise (2), lack of counselling (2), stigma (1) not knowing what services were available (1), distance from services (1), previous attitudes of clinicians (1), lack of endocrinology service (1), lack of electrolysis (1), inappropriateness of offered gender-specific services (sexual health, urology, gynaecology), and lack of access to women-centred services for an MtF respondent. One older respondent remarked that there were no services available in the 1930s and 1940s.

Participants were also asked if they would change anything about the services they had received. Shorter waiting times were mentioned by eight respondents and better access to information for patients by two. Better information for professionals such as GPs was also mentioned by two respondents. Desired services (eg hair removal, counselling, drop in clinics, more doctors, outreach workers) which were not accessible were mentioned by six people. Patient-centredness featured highly in responses to this question:

- "Listen to young people especially when psychiatric staff have little doubt the person will transition. Don't think binary gender male, female, straight, gay, bi and don't assume we hate all parts of our bodies just 'cos we want to transition' (FtM)
- "They are not person centred but rather dictatorial not only about treatment but also about appearance and demeanour. I believe the only way to stop this is to scrap the standards of care and have peer run services" (MtF)
- "Being offered a choice of genital outcomes + being able to discuss beforehand what might be best for me rather than the focus on the type of surgery the surgeon wanted" (MtF)
- "Much more patient-led" (MtF)
- "Employ a transsexual F to M or M to F at ... reception" (MtF)
- "It would be better to not feel that you're being tested all the time and feeling that you don't know how you feel. Experts may know the workings but can't know the feelings" (MtF)
- "I would change the way this condition is treated as a psychiatric one it is not, it is physical. Our brains are those of the opposite sex to our birth sex, that's the problem. It needs to be treated in a much more positive way and everyone needs to be aware and more sensitive to our feelings. In other words we should always be treated as male (if F-M)" (FtM)
- "I have stated to the psychiatrists and GIC consultant that I do not wish at present to full transition but to go onto a hormone programme to make my physical appearance appear more like my mental attitude" (MtF)

Others supported larger scale organisational changes:

- "I would ensure that services do not grow idiosyncratically on a local basis but that nationally there are operational policies" (MtF)
- "I would like more thinking outside the box and more peer support" (MtF)
- "Less travelling to centralised services since the expertise is so limited to achieve a quality service would be difficult to change" (MtF)
- "I would make it mandatory for NHS services + doctors to publicly disclose techniques + preferred prerequisites so patients can make a start on preparations earlier and be confident they're doing it right. Private surgeons advertise their services but NHS staff should also make the information available from an official source or basis. Even a fact sheet would help." (MtF)
- "Hormones used as diagnostic tool and to facilitate switch to real life experience" (MtF)
- "Another gender issue I have is the way we are often lumped together with gays, lesbians and bisexuals as if we are suffering from some sort of sexual [problem]" (FtM)
- "I find the concept of a real life test wholly inappropriate and unhelpful to my own experience of gradually adapting my lifestyle to what it is today" (MtF)

Desired specific new services included NHS laser hair removal and electrolysis (5 people), an expert on penile plastic surgery, a specialist endocrinologist, a more localised specialist nurse to deal with postoperative issues, peer-run services, a service not based on the Harry Benjamin standards of care, easier access to consultants (including via the web), a telephone advice line, earlier use of hormones, a GP service specifically for transgender people (2), better training systems

for NHS staff (3), a service to help people continue in or return to work, a service to help with appearance in the gender of choice, and a managed clinical network for trans people. Three respondents wished that they had been able to access services in childhood, and would wish for greater attention to be paid to gender problems among young people. Two respondents emphasised the general need for holistic and integrated care.

While many respondents wished for easier access to services, another large group wished for an end to their need for them:

"I am planning to have gender re assignment surgery in the very near future and hopefully put most of all this behind me and get on with my life without constantly being involved with gender clinics psychiatrists etc" (MtF)

Self help and support groups

The majority (23/37 MtF and 11/12 FtM) of respondents had attended self-help groups. The groups included a support group attached to a large gender clinic, Transmen Scotland, Crosslynx and a range of local formal and informal groups. The main motivations to attend were a desire to meet people like themselves, to make friends, to get information and a general desire to explore gender issues. Others were looking for more practical support with the transition process. Many of those who had attended groups only attended once or twice, and others attend sporadically (often because of difficulties with timing and work commitments), but some remain long term regular members of support groups. Some respondents reported problems with groups – for example feeling they had nothing in common with transvestites or lesbian/gay/bisexual people who attended, and a sense of lack of support. Many others however saw the groups as an essential part of their transition process.

Internet support groups

Internet support groups had been used by 10/34 MtF and 7/13 FtM respondents. The groups included: FtM-UK, FtM-I, Transmen Scotland, Transclyde at Yahoo, Tn UK, Ftk UK Support Group, Live Journal, FtM_Nw, Ftm Online Communities, Yahoo Transsexual UK Group, FFS Support Group, TS UK, TgNI, TG Community, UK Angels, Ts Haven C/O Health And Medicines Msn Com, Trans World Chat, TVChix, MSN Groups, Aol, TG UK Laser Hair Removal, Nutty Cats and Trannyweb. The reasons for contacting the internet support groups were broadly similar to the motivations to attend self help groups. Comments on the groups were generally positive although adverse opinions were also expressed, particularly about predatory members, parochialism, "cliqueyness", and a tendency to categorise people into "diagnostic boxes".

Other internet resources

Information from the internet was clearly important for many respondents. A total of 18/36 MtF and 7/12 FtM respondents had used web-based information. The resources referred to most commonly were the Press for Change site, sites about legal issues, research, surgery and medication (including buying hormones), and personal websites. Respondents generally commented favourably on internet resources, but some failed to find the information they hoped for, others were confused by the range of views, others commented on inaccurate information and some were concerned about the range of "strange people" using websites.

Other comments

Many participants were keen to tell the story of the immense problems and costs associated with their gender issues:

"Having denied the condition for over 4 decades I felt that I would have been able to continue in the male role and would have wished it that way for my family's sake, however ... it became uncontrollable" (MtF)

"I am glad that I am now female because I wouldn't have made 45 years old other wise. I sold my home to do all this but all that I had didn't make me happy or sexually satisfied. Now I feel so much closer to my being all woman. It's a shame that so many people feel I have let the side down but I had to do this for me. For once in my life be me. Gender recognition application forms is the next thing to fill in now to be legally a woman" (MtF)

Many respondents made general comments about gender and the way it is perceived:

- "I hate being thought of as transsexual or transgender. I am now a man. " (FtM)
- "I believe gender (not sex) is a spectrum, or continuum, with end points 100% male and 100% female and most people being somewhere along that line." (MtF)
- "First 4 decades of my life were about looking for an identity for myself felt neither male or female connections outside of myself only succeeding in deriving a sense of self when I intentionally constructed this internally and expressed it externally as if I was female." (MtF)
- "In spite of all the suffering being transgendered has exposed me to it is huge privilege to be the person I am. [...] The question relates to deeper issues and conflicts within our society and culture. We trans are at cutting edge of this conflict. In later years we will be seen in a very different light" (MtF)

Many respondents wrote about key elements of their transition:

"For most of my life I felt I was a misfit. I find it almost beyond belief that we are beginning to be accepted as normal members of society and I am glad that young transgendered people will have an easier path than that of my generation. I have never achieved much in life, I was preoccupied with my gender problems until the menopause set me free and that coincided with a move to a new town and a new and supportive GP. I was at best prescribed testosterone and my life was transformed" (FtM)

"I don't have any issues with my gender anymore I look male I feel male and am now legally male. I got my new birth certificate last week" (FtM)

"Recognising addressing + resolving my gender related issues has been the best thing I've done. Sometimes I wish I'd been born a girl or had been able to recognise the issues as they emerged at puberty but then I wouldn't be the person I am now. I like the person I am now and feel that the challenges + sense of being an outsider have made me stronger and a better person in myself, at work, in my community and in society. Would I wish to possibly lose that strength that perspective? That's a toughie but of course I would love to have had a normal childhood puberty relationship + sex life + I would love to have had children ie giving birth and being pregnant but life is what you have to deal with and it wasn't otherwise I can say that when I decided it was right for me" (FtM)

"Because I have kids and a career I thought all of it was going to fall apart. However my experience has been quite the opposite. I still have regular positive and loving contact with the children and my ex wife is a friend. I was also worried about the feelings of other people and did my best to make transition easy for others as well as myself" (MtF)

"I used to love dressing in female clothes but thought it was wrong & dirty. At 21 I joined the army to try and make myself more masculine but it didn't work as I used to get a chance to baby sit & when they went out I was into the woman's wardrobe. When I came out of the army I had several relationships and even got married. My sex life was never good - I had a son & daughter from the marriage. After this I had tests & saw psychiatrist about it but I did not tell then about my transvestite life as I thought it was different. About 10 years ago I read a book and it was like reading about myself and that is when I knew what it was. It took me another 3 years before I came out ... By that time my depression was bad and I went to see my GP who got me to see a counsellor and in touch with a psychiatrist. I had met a beautician who was waxing the hairs on my face and she helped me with coming out. I used to go to her house in another town and I found the courage to go out. From that day my confidence has grown and although I lost a lot of friends I

made a lot of new ones. Lots of people where I worked stopped talking to me but I stuck it out until I was 60 when I took early retirement in 2003, not because of the people but because of the job itself. When I first came out in the other town and was all dressed up I used to meet people from my own town but they never recognised me. They were really shocked when I did come out. About July 2000 my GP found a consultant to do my operation and it was done in March 2001. It was the best thing I have done. In July 2003 I had breast implants done. I have no sexual contact with women now but have some sexual experiences with men. They have all been straight and very well behaved. Lately I applied to the gender registration panel and got my certificate saying I am female. I have also now got my new birth certificate. Lately life has got better and there is very little harassment." (MtF)

"In my case I was lucky, I have always worked, not lost friends or family and now have a good relationship" (MtF)

"I have also been completely satisfied about my transition in the workplace where I have been measured on my abilities rather than anything else. Friends and family have all been very supportive both pre and post transition. My ex wife and I still house share and our relationship as friends has improved enormously. I feel very fortunate to be surrounded by such good people" (MtF)

"Since I sought out the help and treatment I've never ever known the peace and happiness I feel with myself now could have even existed. Its hard to explain, but the inner acceptance of myself not having to live a lie and to be completely honest with the world has given me the feeling of being free, alive and not scared anymore and a happiness beyond all boundaries ever known. However I can't help feeling that if Dr Benjamin was taken more seriously and more researched to this condition then maybe I and a lot of other TS people could have been spared all the anguish and treatment and cruelty we have had to endure by the lack of education to others. Then again, if one is not transsexual then they will never know how such a debilitating condition it is without proper treatment. All I can say now is that I am very grateful for the help and treatment I received, but it can be better" (MtF)

DISCUSSION.

Methodology and response rates

Despite having collected information from Scottish general practitioners in 1998⁴ that there were about 300 patients with gender identity issues known to them, an identical question in this survey yielded a figure of half this magnitude, despite obtaining data from a similar, high proportion of practices. We are unable to explain this apparent dramatic reduction in the number of patients with past or present gender problems adequately. It seem unlikely that half the people with gender identity issues have left the county or died – indeed only two GPs reported deaths of patients with gender identity issues. It is possible that GPs chose not to release information in 2003 because of pressure of work.

The low response rates are very disappointing. The questionnaire for people with gender identity issues was very long, and this may have put some people off. Our experience when piloting the questionnaire in clinics had been that volunteers were happy to complete the questionnaires, but it is possible that the positive reactions were related to the patients' current need for treatment.

Some potential participants may have been put off by some of the questions – particularly those about autogynephilia and sexual experiences. In relation to the controversial topic of autogynephilia, despite misgivings from some of the advisory group the study group decided that it was best to include the questions in order to give the community an opportunity to offer its views and experiences. Five respondents (three FtM, two MtF) commented negatively and in some cases angrily on the questionnaire – either about typographical or other errors in the questionnaires or about the perceived general focus on sexuality and physical aspects of the transgender experience. There was feedback from some transmen that the questionnaire was inappropriately designed, with

an excessive focus on genital surgery, without acknowledgement of the overall needs of the individual. Three respondents criticised the perceived fact that gender was dealt with in the questionnaire as simplistic or categorical rather than as complex and continuous and/or objected to the terminology used such as gender dysphoria. Two further respondents were worried about anonymity and being asked for their postcode sector (required for the analysis of socioeconomic status). Despite all this, more respondents were positive than negative about the questionnaire.

One of the research team published a follow up study of 199 post-operative male-to-female cases^c, which led us to believe that at least postoperative people would be likely to agree to participate in the proposed study – and indeed response rates to the GP-distributed questionnaire from postoperative participants were higher (19/58) than from those in early stages of treatment or not in the process of transition (11/72).

In interpreting our findings, it is important to bear in mind that many transgender people did not return questionnaires. All the respondents appeared to fall within the diagnostic category of 'gender identity disorder' or classical transsexualism. We had a reasonable number of responses from postoperative transpeople, but a significant under-representation of people undergoing transition and those who had not had any treatment. It is possible that the stresses of transition may have made those undergoing it less likely to volunteer to complete a lengthy and complex questionnaire. The low level of response to the internet survey may have suggested that there was a low level of access to information about our study among those not using services or support groups. It is also possible that some potential participants did not take part because they took offence at some of the questions - and again this possibility must be borne in mind in interpreting the results and their generalisability.

Gender role

Most respondents (41/50) had transitioned and were living full time in the gender of their choice. Generally, transmen were more confident than transwomen about their appearance.

Interestingly average scores on both the masculinity scales and the femininity scales of the Bem Sex Role Inventory were fairly similar among the FtM and MtF respondents. We compared the figures obtained in this survey to those obtained from 35 and 55 year olds in the West of Scotland 2007 population study¹⁶. Average scores for both MtF and FtM respondents on the masculinity scale were very close to the masculinity scale scores of West of Scotland women. On the other hand, MtF respondents had average femininity scores very close to those of West of Scotland women while FtM respondents' femininity scale scores lay close to those of West of Scotland men.

The social environment

Respondents live in a wide range of geographical locations and socio-economic circumstances. A

higher proportion of participants were unemployed or unable to work because of disability than the general population. Experiences surrounding gender transition within families ranged from remarkable levels of support to total rejection and threats of violence – and it is clear that family support was often lacking at times of most need. Experiences with friendships ran in parallel to those with families, and it is apparent that many respondents had lost all their pre-transition friends. Problems with friendships seem to be greater for MtF respondents than FtM participants

Accounts of transition in the workplace, were, in contrast, generally positive. There were however some reports of harassment and serious discrimination.

Most respondents had experienced verbal aggression, most commonly from teenagers in the street. Most respondents had also experienced threats, largely from strangers - particularly teenagers.

^c Young, R., Muirhead-Allwood, S.K. and Royle, M. (1999). "Factor Analysis of Satisfaction with Vaginal Reconstructive Surgery in Post-Operative Male-to-Female Transsexuals", Poster presented at the 1999 Harry Benjamin International Gender Dysphoria Association Symposium.

There were also many reports of physical aggression. Assaults were both physical and sexual, and had been committed by acquaintances, neighbours and strangers.

Although the majority of respondents had experienced verbal aggression (or worse) in public, many had also had good experiences. It is also encouraging to note the number of good experiences with the police service in responding to complaints about transphobic attacks.

Mental health and wellbeing

The vast majority of respondents reported major psychological distress before transition. Manifestations of this included self harm, drug and alcohol use. The majority had also used antidepressants or anti-anxiety drugs before or during transition.

Both the scores on the mental health scales and the qualitative data suggest that operative intervention improved mental health.

It is however also clear from scores on the Scl-90 and SF-36 scales and from free text comments that a substantial number of respondents continue to experience major psychological difficulties after transition. Among MtF respondents, average scores on the Scl-90 scales were midway between a US psychiatric outpatient population and a general population sample¹² for somatisation, interpersonal sensitivity, depression, phobic anxiety, paranoid ideation. FtM respondents seemed. on average, to enjoy better mental health – having scores on all scales closer to the population norm than to psychiatric outpatients. Interestingly, this phenomenon was not found in Haraldsen and Dahl's study of Norwegian transsexual patients, where scores for FtM and MtF respondents were roughly similar – and in all cases lower than those for the MtF respondents reported here. Current use of illicit drugs was low.

There are several possible explanations for these findings. Generally, transmen 'pass' more effectively as members of their chosen gender than transwomen – the responses of our participants to questions about 'ease of detection' certainly bear this out. Although three participants stated that they had no interest in 'passing' it is likely that not doing so is more likely to lead to difficulties in social relationships and so mental ill-health. Finally, the difference between the mental wellbeing of MtF respondents in Scotland and Norway is striking - it is possible that variations from conventional gender roles are better tolerated in Norway.

The levels of self harm behaviours – reported by half of all respondents - are striking. Serious selfharming behaviour has been reported to be a common feature among transgender patients who have used services (in several reports at least 20%), but it not known whether or not treatment reduces suicidal behaviour⁷. Among our sample, self-harm within the past year had fallen to relatively low levels, but even this reduced level of self-harm far exceeded expected population norms (approximately 1%). Additionally, one GP response indicated a completed suicide

Sexual orientation and sexuality

In relation to lifestyle, comfort with self was valued above sexuality. Sexual activity was more highly valued among transmen. The post-transition transpeople included a higher proportion of lesbians and bisexuals than the general population²³.

Autogynephilia has aroused heated debate in the trans community^d. The questions about autogynephilia clearly caused distress to some respondents, and may have led to some potential participants not taking part in the study. Blanchard has proposed that MtF patients in his service fall in to two categories – 'androphile,' or attracted to men, and 'autogynephile,' or attracted to the feminised self. According to Blanchard, the latter group tend to be older and have often been married. Our results do tend to confirm the existence of an autogynephile group – the majority of MtF respondents reported sexual arousal at the thought of having a female body. Against

^d See http://www.annelawrence.com/sexualityindex.html and http://www.tsroadmap.com/info/bailey-blanchardlawrence.html for highly contrasting perspectives.

Blanchard's original theory, however, MtF respondents attracted to females were actually less likely to report autogynephilic attraction than those who were sexually attracted to males. This phenomenon has however been reported by a number of authors ^{14;18;24-26} and there may be a variety of explanations for it. Interestingly, the mental health of autogynephilic transwomen was better than the non-autogynephilic group.

It may be important to acknowledge the existence of an autogynephilic group of MtF patients – if they experience as much psychological distress as other transwomen before transition, and benefit psychologically as much from transition as other transwomen²⁷, it may be difficult to justify the view that they should be denied treatment. Furthermore, if autogynephilia is a genuine source of distress, its acceptance by service providers may lead to greater honesty in clinical encounters and hence better support for patients.

Service use and experiences

We obtained much useful information from those who had used services. There was general satisfaction with and appreciation of health service provision, but there were individual reports of long waiting times, negative professional attitudes and lack of information for service users and service providers alike. Lack of knowledge was reported among some professionals.

Psychiatric services were frequently mentioned, and comments were generally positive. Nevertheless, worryingly, there were a number of reports of extremely negative experiences. General practitioners were used by almost all respondents and perceptions were generally favourable. Some dissatisfied respondents reported ignorance of their condition among their GPs and generally unhelpful attitudes. Attitudes to surgical services and speech therapy were generally very positive.

Lack of hair removal services was frequently mentioned by respondents. Services for young people were also often perceived as inadequate.

Self-help groups were used and admired but there were comments about lack of diversity within the groups.

Availability of services in Scotland often depends on the place of residence of the trans person and frequently rely on a single individual from a specific discipline being in post at any one time. When specialists working with transsexuals retire there is rarely any succession planning for the post. There is clearly a need for coordinated services yet to date there has been very little published information on how these services should be shaped.

RECOMMENDATIONS

- The single most important health issue is the lack of provision of appropriate mental health services for transpeople.
- Some new services are required, particularly NHS provision of hair removal and services for younger transpeople
- A consolidated, rather than a piecemeal approach to service provision is required. A managed clinical network would ensure equality of access to evidence-based care throughout Scotland.
- Training for staff in non-discriminatory practice is required
- Problems within families were almost universal among our respondents. There is a need for family support services.
- There is a need for greater diversity among self-help groups in terms of access and social groupings
- Better information systems for professionals coming into contact with transpeople need to be established
- Further specific study among transmen and younger transpeople would be valuable.

Reference List

- 1. International Commission on Civil Status. Transsexualism in Europe. Strasbourg Cedex: Council of Europe Publishing, 2000.
- 2. Keown J. Funding "Sex-change" Operations. Cambridge Law Journal 2000;59:257-9.
- 3. Home Office. Report of the Interdepartmental Working Group on Transsexual People. 2000. London, The Stationery Office.
- 4. Wilson P, Sharp C, Carr S. The prevalence of gender dysphoria in Scotland: a primary care study. *British Journal of General Practice* 1999;**49**:991-2.
- 5. Scottish Needs Assessment Programme. Transsexualism and Gender Dysphoria in Scotland. 2001.
- 6. Green R, Fleming DT. Transsexual surgery follow-up: status in the 1990s. *Annual review of sex research* 1990;1:163-74.
- 7. Pfäfflin, F. and Junge, A. Sex Reassignment. Thirty Years of International Follow-up Studies After Sex Reassignment Surgery: A Comprehensive Review, 1961-1991. http://www.symposion.com/ijt/pfaefflin/1000.htm . 1998.
- 8. Wessex Institute Development and Evaluation Committee. Report No 88: surgical gender reassignment for male to female transsexual people (literature review). http://www.pfc.org.uk/medical/sw-rpt.pdf . 1998.
- 9. Barrett, J. Psychological and social function before and after phalloplasty. International Journal of Transgenderism http://www.symposion.com/ijt/ijtc0303.htm 2, 1. 1998.
- 10. Witten TM. Geriatric care and management issues for the transgender and intersex populations. *Geriatric Care and Management Journal* 2002;**12**:20-4.
- 11. Fitzpatrick, R., Davey, C., Buxton, M. J., and Jones, D. R. Evaluating patient-based outcome measures for use in clinical trials. Health Technology Assessment 2(14), 1-86. 1998.
- 12. Derogatis LR. SCL-90-R. Administration, scoring and procedures manual. Baltimore, MD: Clinical Research Inc., 1983.
- 13. Haraldsen IR, Dahl AA. Symptom profiles of gender dysphoric patients of transsexual type compared to patients with personality disorders and healthy adults. *Acta Psychiatr Scand* 2000;**102**:276-81.
- 14. Blanchard R, Steiner BW, Clemmensen LH. Gender dysphoria, gender reorientation, and the clinical management of transsexualism. *Journal of Consulting and Clinical Psychology* 1985;**53**:295-304.
- 15. Bem S. Bem Sex-Role Inventory. Professional Manual. Palo Alto, California: Consulting Psychologist Press., 1981.
- 16. Hunt K, Sweeting H. Gender Role Orientation and Age: A comparison of the Bem Sex Role Inventory in Three Cohorts. MRC Medical Sociology Unit Working Paper. 1996.

- 17. Lindgren R, Pauly I. A body image scale for evaluating transsexuals. *Archives of Sexual Behavior* 1975;**4**:639-56.
- 18. Blanchard R. The Concept of Autogynephilia and the Typology of Male Gender Dysphoria. *The Journal of Nervous and Mental Disease* 1989;**177**:616-23.
- 19. Muirhead-Allwood SK, Royle M, Young R. Sexuality and satisfaction with surgical results in 140 male-to-female transsexuals. Poster presented at 17th Harry Benjamin Gender Dysphoria Conference. 1999.
- 20. Bowling A. Measuring disease. Buckingham.: Open University Press, 1995.
- 21. Jenkinson C, Stewart-Brown S, Petersen S, Paice C. Assessment of the SF-36 version 2 in the United Kingdom. *Journal of Epidemiology and Community Health* 1999;**53**:46-50.
- 22. Klassen A, Jenkinson C, Fitzpatrick R, Goodacre T. Patients' health related quality life before and after aesthetic surgery. *British Journal of Plastic Surgery* 1996;**49**:433-8.
- 23. Johnson AM, Mercer CH, Erens B, Copas AJ, McManus S, Wellings K *et al.* Sexual behaviour in Britain: partnerships, practices, and HIV risk behaviours. *Lancet* 2001;**358**:1835-42.
- 24. Bentler P. A typology of transsexualism: Gender identity theory and data. *Arch Sex Behav* 1976;**5**:567-84.
- 25. Freund K, Steiner B, Chan S. Two types of cross-gender identity. *Arch Sex Behav* 1982;11:49-63.
- 26. Leavitt F,.Berger J. Clinical patterns among male transsexual candidates with an erotic interest in males. *Arch Sex Behav* 1990;**19**:491-505.
- 27. Lawrence AA. Factors associated with satisfaction or regret following male-to-female sex reassignment surgery. *Archives of Sexual Behavior*, 2003;**32**:299-315.