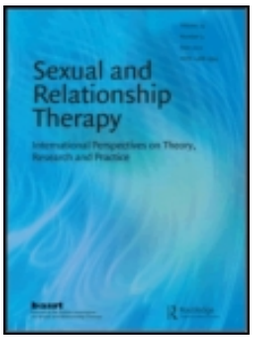

Sexual and Relationship Therapy

ISSN: 1468-1994 (Print) 1468-1749 (Online) Journal homepage: www.tandfonline.com/journals/csmt20

Anxiety and depression in males experiencing gender dysphoria

Deepak Megeri & Deenesh Khoosal

To cite this article: Deepak Megeri & Deenesh Khoosal (2007) Anxiety and depression in males experiencing gender dysphoria, Sexual and Relationship Therapy, 22:1, 77-81, DOI: 10.1080/02699200600565905

To link to this article: https://doi.org/10.1080/02699200600565905

Sexual and Relationship Therapy
Vol 22, No. 1, February 2007

Routledge
Taylor & Francis Group

Anxiety and depression in males experiencing gender dysphoria

DEEPAK MEGERI & DEENESH KHOOSAL
Brandon Mental Health Unit, Leicester General Hospital, Leicester LE5 4PW, UK

ABSTRACT *Objective: The aim of the study was to compare anxiety and depression scores for the first 40 male to female people experiencing gender dysphoria attending the Leicester Gender Identity Clinic using the same sample as control pre and post gender realignment surgery.*
Hypothesis: There is an improvement in the scores of anxiety and depression following gender realignment surgery among people with gender dysphoria (male to female – transwomen).
Results: There was no significant change in anxiety and depression scores in people with gender dysphoria (male to female) pre- and post-operatively.

KEYWORDS: *male to female gender dysphoria; anxiety; depression; gender realignment surgery*

Introduction

Gender dysphoria (GD), Gender identity disorder and Transsexualism are medical terms used interchangeably for the anxiety, confusion or discomfort that is produced for some people by birth gender. Those who feel they have been born into the wrong gender are often aware that there is ''something wrong'' usually early in childhood. Even as children they feel different from their peers and uncertain about their identity.

ICD 10 (the International Classification of Disorders) defines transsexualism (F64.0) as a

> ''desire to live and be accepted as a member of the opposite sex, 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 congruent as possible with the preferred sex. This transsexual identity should have been present persistently for at least two years for the diagnosis to be made. It must not be a symptom of another mental disorder, such as schizophrenia or associated with any intersex, genetic or sex chromosome abnormality''.

Correspondence to: Deenesh Khoosal, Leicester Gender Identity Clinic, Brandon Mental Health Unit, Leicester General Hospital, Gwendolen Road, Leicester LE5 4PW. Tel: (44) 116 225 6209.

Received 03 August 2005; Accepted 12 January 2006.

ISSN 1468-1994 print/ISSN 1468-1749 online/07/010077-05

DOI: 10.1080/02699200600565905

Some argue that its inclusion in the DSM (Diagnostic and Statistical Manual) and ICD-10 classification system is necessary for gaining access to the full range of medical services needed to resolve gender issues.

Gender clinic referrals for GD indicate an incidence of approximately 1:30,000 for male to females (transwomen) and 1:100,000 for female to males (transmen). However, the Gender Identity Research and Education Society (GIRES) estimates that there are about 15,000 people in the UK receiving some form of medical help for gender dysphoria. This equates to about 1:4000 for the whole population. More males than females experience gender dysphoria, (two to three men for every woman).

Little is known about the causes of GD. GD is believed to be associated with the neurodevelopment of the brain (Zhou *et al.*, 1995; Kruijver *et al.*, 2000) as the foetal brain is known to be subject to the organising properties of sex hormones (Kruijver *et al.*, 2001; Swaab *et al.*, 2003, 2004). In GD, atypical effects are thought to produce sex reversal in the structure of brain BSTc (the bed nucleus of the stria terminalis) (Kruijver, 2004). This is believed to cause certain parts of the brain to develop a pattern opposite to the anatomic sex. This link is further substantiated by abnormally low levels of HY antigen seen in significant proportions of transwomen. Others believe that early childhood psychological experiences affect the outward expression of gender behaviour. Psychosocial hormonal, genetic and environmental factors acting separately or in combination are likely to affect outcome (Connolly, 2003).

People attending the Leicester Gender Identity Clinic often report feelings of anxiety and depression. However, there is no study in the United Kingdom comparing anxiety and depression scores pre and post gender realignment surgery. This study aims to bridge the gap by using the same sample as control.

Method

This study was conducted at the Leicester Gender Identity Clinic based at the Leicester General Hospital. It was conducted because little is known about the extent of depression and anxiety in this group of people. This clinic has been offering a comprehensive service for patients over the age of 18 years starting with initial assessment through to GRS and follow up since 1994. During this time the clinic has assessed a total of 546 people of whom 318 have achieved surgery. The service sees people of local origin (127 of whom 38 proceeded to GRS) as well as from elsewhere in the UK and abroad. At initial assessment, patients are invited to submit the story of their life. This is reviewed by the multidisciplinary Gender Panel together with the professional assessments before deciding whether the person is accepted for treatment. For the study, patients were invited to complete self-administered rating scales pre- and post-operatively. Patients were told that the questionnaires would be scored a minimum of 3 years after surgery so that their responses would not influence their management. No one declined to complete the rating scales. All questionnaires were returned by post. The first 40 transwomen achieving GRS were entered into the study. A review of their notes revealed that no one had an anxious premorbid personality or a past psychiatric history.

The self-rating questionnaires selected were the Hospital Anxiety Depression scale (HAD), Spielberger State and Trait Anxiety Questionnaire (STAI-X1 and STAI-X2), the Beck Depression Inventory (BDI), and the General Health Questionnaire (GHQ) with its four subscales of A (Somatic Complaint Score), B (Anxiety and Insomnia Score), C (Social Dysfunction Score) and D (Severe Depression Score). These scales were selected because of their well-accepted reliability. An overlap of questionnaires was planned, as there is a difference in the questions asked and how the questions themselves were asked.

We believed that having GD was likely to be associated with a greater degree of anxiety and depression. Potential sources of depression and anxiety could be related to living in birth gender or new gender or coping with the demands of employment, family and partners or the stress of surviving despite having GD. We anticipated that these symptoms would disappear following surgery.

Power calculation was over 80% for this study. Pair-wise *t*-test statistical analysis was carried out with results of each scale after calculating the mean difference value and standard deviation for each.

Results

Forty transwomen who had progressed to GRS and who had completed pre- and post-operative rating scales were entered into the study. The age range at initial assessment was 23 years to 75 years. The average age was 41.8 years with 52.5% falling below the average age. The time from first assessment to GRS surgery varied from 2 months to 6 years. The average waiting time for surgery was 14 months with 75% of people waiting less than the average time (Table I).

With this sample of 40 transwomen there was no significant change in anxiety or depression scores following gender realignment surgery ($p > 0.05$). Only the HAD

TABLE I. Results of the study.

Scale	Mean difference	SD	*p* Value	95% Confidence interval of mean difference
HAD-Anxiety	−0.95	3.95	0.07	−0.37 to 2.37
HAD-Depression	−0.40	3.70	0.25	−0.92 to 1.72
BDI	−0.97	10.22	0.28	−2.27 to 3.86
STAI-X1	−0.67	14.44	0.39	−3.80 to 5.20
STAI-X2	−0.87	12.74	0.33	−3.36 to 5.16
GHQ-A	0.57	3.91	0.82	−1.93 to 0.73
GHQ-B	−0.75	4.73	0.16	−0.84 to 2.44
GHQ-C	1.05	4.15	0.94	−2.17 to 0.17
GHQ-D	−0.75	6.15	0.22	−1.13 to 2.73
GHQ-Total	0.12	16.11	0.52	−5.37 to 4.58

p Value: statistical significance < 0.05; non significance > 0.05.
Power calculation: $> 80\%$.

Anxiety scores reached anything close to significance at 0.07 (confidence interval of mean difference was −0.37 to 2.37). There was no significant evidence of depression in any of the scores on the rating scales used in this study.

Discussion

This study finds that there was no significant improvement on the scores of anxiety or depression in transwomen even though some patients reported experiencing these symptoms preoperatively. Possible reasons for this include professional expectations being misplaced and patients not wanting to present themselves in anything but the best light in case it adversely affected progression to GRS. It is also possible that patients attending the Leicester clinic were reassured by the availability of a comprehensive service. It is also possible that this sample was unusual because many people in this study had already attended other Gender Identity Clinics elsewhere in the country. The Leicester Clinic took this time into consideration for the real-life experience. This is reflected in the short waiting time to GRS for some people (2 to 14 months for 75% of the sample). It may also be that these scales though standardised were not sensitive enough for this population. In addition it is unusual to have a 100% response rate to a questionnaire study let alone one that has to be returned by post not once but twice!

This study is one of the first ones to formally investigate the extent of these symptoms in this group of patients. If replicated this should stimulate greater discussion in attempting to understand the symptoms of anxiety and depression reported by some of these patients. Until then it seems important for clinicians working in this field to continue to carefully assess patients for these eminently treatable symptoms as part of a person centred management plan.

Acknowledgements

The authors are grateful to all the patients who gave their time to complete these questionnaires, to Keith Abrams (Professor of Medical Statistics, University of Leicester) for statistical advice, to the members of the Leicester Gender Panel for their continued support and wisdom, to Pauline Stead, Dr Ben Udeze and the many others without whose help this paper would not have been possible.

References

CONNOLLY, P. (2003). Transgendered peoples of Samoa, Tonga and India: diversity of psychosocial challenges, coping and styles of gender reassignment. Harry Benjamin International Gender Dysphoria Association Conference Proceedings, Ghent, Belgium.

KRUIJVER, F.P.M., ZHOU, J.-N., POOL, C.W., HOFFMAN, M.A., GOOREN, L.J.G. & SWAAB, D.F. (2000). Male to female transsexual have female neuron numbers in limbic nucleus. *Journal of Clinical Endocrinology and Metabolism*, *85*(5), 2034–2041.

KRUIJVER, F.P.M., CHUNG, W.C.J., SWAAB, D.F., HOFFMAN, M.A. & ISHUNINA, T.A. (2001). Structural and functional differences in the human hypothalamus. *Hormones and Behaviours*, *40*, 93–98.

KRUIJVER, F.P.M. (2004). *Sex in the brain.* Maastricht: Ponsen & Looijen.

MEYER, W., BOCKTING, W., *et al.* (2001). The standards of care for gender identity disorders – sixth version. *International Journal of Transgenderism*, *5*(1).

SWAAB, D.F., CHUNG, W.C.J., KRUIJVER, F.P.M., HOFFMAN, M.A. & HESTIANTORO, A. (2003). Sex differences in the human hypothalamus in the different stages of human life. *Neurobiology of Ageing*, Suppl. 1, S1 – S19.

SWAAB, D.F., KRUIJVER, F.P.M. & HESTIANTORO, A. (2004). Sex hormone receptors in the human hypothalamus in different stages of human life. In A.R. GENAZZANI (Ed.), *Hormone replacement therapy and the brain. The current status of research and practice*, pp. 44 – 51. Boca Raton, FL: Partheron Publishing Group.

WORLD HEALTH ORGANISATION (1992). Tenth revision of the international classification of diseases of related health problem (ICD-10). Geneva: WHO.

ZHOU, J.-N., HOFMAN, M.A., GOOREN, L.J.G. & SWAAB, D.F. (1995). A sex difference in the human brain and its relation to transsexuality. *Nature*, *378*(6552), 68 – 70.

Contributors

DEEPAK MEGERI, MBBS, *SHO in Psychiatry*

DEENESH KHOOSAL, FRCPsych, *Consultant Psychiatrist*