

Incidence and sex ratio of transsexualism in Sweden

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The incidence and sex ratio of transsexualism in Sweden were calculated during the period between 1 July 1972 and 30 June 1992 using a case register kept on file at the Swedish Bureau of Social Welfare. Only cases of primary/genuine transsexualism were considered. The study is unique in that it has been performed in exactly the same way as a previous study by one of the authors (JW) in the 1960s and early 1970s. The data can therefore be reliably compared. The results show that the incidence figures remain constant over time and that the incidence of primary/genuine transsexualism is equally common in men and women. A larger group consisting of all those individuals who had applied for sex reassignment revealed a preponderance of men. Analysis showed that this large group included not only primary/genuine transsexuals but also effeminate homosexuals, transvestites and diagnostically uncertain cases. The importance of describing the exact methods used when calculating epidemiological data is highlighted.

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Introduction

The incidence of transsexualism and the question of whether more men than women are transsexuals are two important issues to address because of their implications in the discussion as to whether transsexualism is a disorder independent of environment or merely a phenomenon of our time and the societies in which we live.

In the late 1960s and 1970s Wälinder (1) presented data on the incidence and sex ratio of transsexualism in Sweden. He calculated the annual incidence of requests for sex reassignment, including all applications between 1968 and 1970, to be 0.15 per 100 000 inhabitants over 15 years of age. The incidence in England and Wales was calculated by Hoenig and Kenna (2) to be 0.17–0.26 per 100 000 inhabitants during the years 1966 to 1968, and in Australia, Ross et al. (3) reported an incidence of 0.58 per 100 000 inhabitants over 15 years of age. However, in order to analyse the frequency data in more detail it is important to provide data that can be easily compared with previous reports. The aim of the present study was to comment on 20 years of legally supported sex reassignment (i.e. the time span since a law concerning sex reassignment came into force in Sweden) and to compare past and

recent data on the incidence in Sweden which have been calculated in the same way.

Materials and methods

Since sex reassignment in Sweden requires permission from and is registered at the Bureau of Social Welfare, in this country we have a unique means of determining the frequency of transsexualism. In this investigation, we calculated the incidence and sex ratio of transsexualism with access to all files processed regarding sex reassignment in Sweden from 1 July 1972 to 30 June 1992. In addition, our data has been processed in a similar manner to earlier Swedish data (1), and may therefore be compared reliably with the earlier figures and analysed.

Since 1 July 1972, the official authorization of sex reassignment and sex reassignment surgery in Sweden has been regulated by a special law (4). Matters concerning transsexualism are handled according to the international standards of care (5), and after observation and hormone treatment the patient is registered at the Bureau of Social Welfare in order to gain permission from the state authorities to obtain a change of name and to undergo surgery. The application must be accompanied by

a medical certificate in which documentation for the diagnosis is presented. These documents are classified as 'secret' and kept on file. With permission from the Bureau of Social Welfare, we gained access to all files for the period between 1 July 1972 and 30 June 1992, in order to evaluate the 20-year pattern of incidence and sex ratio of a cohort of transsexuals who had applied for sex reassignment during this period.

Definition

The criteria for transsexualism that are used when calculating prevalence and incidence have been described previously (6). These criteria adhere closely to those of the DSM-IV (7).

However, it has been proposed that transsexuals fall into two groups: primary and secondary (8, 9). Genuine transsexualism (10) is a synonym for primary transsexualism, and its prominent features (11) are a firm conviction, present since childhood, of belonging to the opposite sex, together with effeminate behaviour, an aversion to secondary sexual characteristics, low sexual libido, lack of sexual arousal with cross-dressing, homosexual orientation, and no fluctuation in symptoms of gender dysphoria. Individuals displaying secondary transsexualism, on the other hand, consist mainly of effeminate homosexuals and transvestites.

It was soon discovered that a few of the cases processed diagnostically belonged to the secondary transsexualism group, and in order to obtain incidence figures for primary transsexualism we wanted to exclude the first group from the sample. Since all medical records are kept on file, it was possible to identify those individuals with a diagnosis of primary transsexualism, and to set the others aside.

Results

During the 20-year period of the study, 233 requests for sex reassignment were processed, and the incidence data were calculated on the basis of this group. This means that the average annual frequency was 11.6 cases. The number of inhabitants in Sweden over 15 years of age increased during the study period from 6.5 million to 7.1 million, i.e. there was a mean population of 6.8 million (12), which gives an annual incidence of request for sex reassignment of 0.17 per 100 000 inhabitants. The sex ratio (male: female) is 1.4:1. To resolve the question of whether transsexualism increases or decreases, we divided the group into two 10-year periods. As can be seen from Table 1, not only do our results agree with the Swedish incidence data published in the 1970s, but also they remain remarkably stable over time.

Separating from all applications the group with primary transsexualism yielded 188 cases, i.e. 9.4 cases annually. As is shown in Table 2, this corresponds to an incidence of primary transsexualism of 0.14 per 100 000 inhabitants over 15 years of age. It should also be noted that primary transsexualism is equally common in women and men.

Discussion

This study of incidence is unique in that it has been performed in exactly the same way as the study made by Wålinder in the 1960s and 1970s, and the figures may therefore permit comparison of data between studies. It is noteworthy that the incidence of transsexualism remains astonishingly constant over time.

Another important conclusion that can be drawn from this study is that the incidence of primary

Table 1. Incidence and sex ratio in Sweden for individuals who requested sex reassignment: all applications

	Total	Female	Male	Incidence/100 000 and year ^a	Sex ratio (male: female)
July 1972–June 1982	116	53	63	0.17	1.2:1
July 1982–June 1992	117	45	72	0.17	1.6:1
July 1972–June 1992	233	98	135	0.17	1.4:1

^a For subjects over 15 years of age.

Table 2. Incidence and sex ratio in Sweden for individuals who requested sex reassignment: primary transsexuals only

	Total	Female	Male	Incidence/100 000 and year ^a	Sex ratio (male: female)
July 1972–June 1982	99	51	48	0.15	0.9:1
July 1982–June 1992	89	45	44	0.13	1.0:1
July 1972–June 1992	188	96	92	0.14	1.0:1

^a For subjects over 15 years of age.

transsexualism is the same in women as in men, while in the larger group, consisting of all applicants for sex reassignment, which includes effeminate homosexuals, transvestites and other diagnostically uncertain cases, men predominate. This confirms earlier findings from our group (13). Conflicting results with regard to epidemiological data may depend on the scientific strategies used. The importance of describing the exact methods employed when calculating epidemiological data cannot be overemphasized.

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References

1. WÄLINDER J. Incidence and sex ratio of transsexualism in Sweden. *Br J Psychiatry* 1971; 119: 195-196.
2. HOENIG J, KENNA JK. The prevalence of transsexualism in England and Wales. *Br J Psychiatry* 1974; 124: 181-190.
3. ROSS MW, WÄLINDER J, LUNDSTRÖM B, THUWE I. Cross-cultural approaches to transsexualism. *Acta Psychiatr Scand* 1981; 63: 75-82.
4. WÄLINDER J, THUWE I. A law concerning sex reassignment of transsexuals in Sweden. *Arch Sex Behav* 1976; 5: 255-258.
5. WALKER PA, BERGE JC, GREEN R, LAUB DR, REYNOLDS CL, WOLLMANN L. Standards of care. The hormonal and surgical sex reassignment of gender dysphoric persons. *Arch Sex Behav* 1985; 14: 79-90.
6. LANDÉN M, WÄLINDER J, LUNDSTRÖM B. Prevalence, incidence and sex ratio of transsexualism. *Acta Psychiatr Scand* 1996; 93: 000-000.
7. American Psychiatric Association. Diagnostic and statistical manual of mental disorders, 4th edn. Washington, DC: American Psychiatric Association, 1994.
8. PERSON E, OVESEY L. The transsexual syndrome in males; primary transsexualism. *Am J Psychother* 1979; 28: 4-20.
9. PERSON E, OVESEY L. The transsexual syndrome in males; secondary transsexualism. *Am J Psychother* 1979; 28: 174-193.
10. LUNDSTRÖM B. Outcome of persons who have been refused sex reassignment surgery. In: EICHER W et al., ed. *Sexology*. Berlin: Springer-Verlag, 1988: 192-195.
11. LUNDSTRÖM B, PAULY I, WÄLINDER J. Outcome of sex reassignment surgery. *Acta Psychiatr Scand* 1984; 70: 289-294.
12. Statistical yearbook of Sweden 1995. Stockholm: Statistics Sweden, 1994.
13. LUNDSTRÖM B. Gender dysphoria, A social-psychiatric follow-up study of 31 cases not accepted for sex reassignment. Thesis, University of Göteborg, Göteborg, 1981.