

ORIGINAL RESEARCH—INTERSEX AND GENDER IDENTITY DISORDERS

Female and Male Transgender Quality of Life: Socioeconomic and Medical Differences

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ABSTRACT

Introduction. Studies show a positive impact of gender reassignment treatment on the quality of life (QOL) of transgender persons, but little is known about the influence of their socioeconomic status.

Aim. First, to assess health-related QOL of transgender men and women and compare it with a general population sample, second, to investigate the differences between transgender men and transgender women, and third, to analyze how their levels of QOL differ according to socioeconomic and transition data.

Methods. One hundred forty-eight current and former transgender patients of a gender identity clinic participated in a large QOL study.

Main Outcomes Measures. Health-related QOL was measured using the Short Form 36-Item Questionnaire.

Results. The QOL of transgender women did not differ significantly from the general Dutch female population, although transgender men showed reduced mental health-related QOL compared with the general Dutch male sample. Transgender women had a lower QOL than transgender men for the subscales physical functioning and general health, but better QOL for bodily pain. Time since start of hormone use was positively associated for transgender women with subscales bodily pain and general health, and negatively associated for transgender men with the subscale role limitations due to physical health problems. There was no significant difference in QOL between the group who had undergone genital surgery or surgical breast augmentation and the group who did not have these surgeries. Transgender men with an erection prosthesis scored significantly better on the subscales vitality and (at trend level) on role limitations due to emotional problems. A series of univariate analyses revealed significantly lower QOL scores for transgender persons that were older, low educated, unemployed, had a low household income, and were single.

Conclusions. Specific social indicators are important in relation to health-related QOL of transgenders in a context of qualitative and adequate medical care. **Motmans J, Meier P, Ponnet K, and T'Sjoen G. Female and male transgender quality of life: Socioeconomic and medical differences. J Sex Med 2012;9:743–750.**

Key Words. Transgender; Quality of Life; Socioeconomic Differences; Medical Indicators

Introduction

Over the last 40 years, hormonal and surgical gender reassignment procedures have been increasingly refined and accepted medically as standard procedure for the treatment of transgender individuals [1,2]. Recent research into the self-

reported physical and mental health-related quality of life (QOL) of transgender individuals reveals lower scores when compared with a general population sample but suggests a positive impact of certain medical interventions. Newfield et al. found significantly diminished QOL among 376 female-to-male transsexuals (trans men) compared

with the U.S. male and female population and reported significantly better QOL for those trans men receiving hormonal treatment [3]. In a study among 247 male-to-female transsexuals (trans women) in the United States, Ainsworth and Spiegel found poorer mental health-related QOL in trans women compared with the general female population, but an improved QOL for those trans women who had undergone facial feminization surgery (FFS) and/or gender reassignment surgery (GRS) [4]. Kuhn et al. found significantly lower QOL in general health, personal, physical, and role limitations among 52 trans women 15 years after GRS [5]. In a Belgian study conducted among 50 post-GRS trans women, Weyers et al. reported that trans women did not differ significantly with the general female population sample and that women involved in a relationship scored better for vitality, social functioning, and mental health [6]. Wierckx et al. measured QOL in a group of 49 trans men with an average of 8 years after GRS and found significantly lower QOL for mental health and for vitality compared with the general male population, and a tendency to score better on the social component summary scores when participants were in a relationship [7].

So far, little research has combined sociodemographic as well as medical aspects in analyzing QOL. Gender, age, and prevalence of chronic health conditions are known to lead to differences in Short Form 36-Item Questionnaire (SF-36) mean scale scores [8]. Older people score generally lower on the SF-36 scales related to physical functioning, women score lower than men on all SF-36 scales, and respondents with a chronic health condition score lower on all eight SF-36 scales than those without such a condition [8]. Diener and Suh underline that objective social and economic indicators are both essential to gain an insight into the experienced QOL and should be considered complementary to indicators on subjective well-being as both measure different aspects of QOL [9]. In the current study, we analyze QOL in a large cohort of trans persons through medical as well as socioeconomic indicators.

Aims

Our first aim was to assess the self-reported health-related QOL of both trans men and trans women, and to compare them with the general population. Our second aim was to investigate QOL differences between trans men and trans women. Our third aim was to look closer at the QOL within the transgender sample and to

examine how their levels of QOL differ according to the socioeconomic and transition variables.

Methods

Study Population

Respondents (N = 255, 148 trans women and 107 trans men) were selected from the patient database of a gender identity clinic, located in a university hospital, based on criteria of (i) diagnosis of gender identity disorder; (ii) living according to the preferred gender identity; and (iii) Dutch speaking.

Study Procedures

The respondents were invited by post to participate in a larger QOL study. Respondents received a paper version of the survey and a stamped return envelope, or could choose to fill in the survey online (by personal code). Approximately 80% of the respondents completed a paper-and-pencil version of the survey, with the remaining 20% using the online version. All surveys were collected in two waves of recruitment between July and September 2010. The study was approved by the Ethical Committee (EC number EC/2010/262).

Statistical Analysis

We imported both online and on paper survey data into PASW Statistics 18 for Windows (SPSS Inc., Chicago, IL, USA) for analysis. Distributions are summarized through means and standard deviations. Internal consistency within the scales used was assessed through Cronbach's alpha metric. Correlations were calculated under the parametric assumption as Pearson's correlation coefficients (r). Distributions between groups were compared with χ^2 tests. We used one-way analyses of variance (ANOVAS) to determine significant QOL differences between the groups. Statistical significance was accepted at the two-tailed $\alpha = 0.05$ significance level.

Main Outcome Measures

Health-Related QOL

To measure the health-related QOL of transgender respondents, we used the Dutch validated translation of the SF-36 [8,10,11]. This widely used measurement tool contains 36 questions that cover eight multi-item scales:

1. Physical functioning (PF) domain scale evaluates the presence and severity of limitations to physical activities;

2. Role limitations due to physical health problems assess the limitations to work or other daily activities;
3. Bodily pain (BP) determines the impact pain on daily activities;
4. General health perceptions (GH) determine overall sense of well-being;
5. Vitality (VT) evaluates the influence of health on energy level and fatigue;
6. Social functioning (SF) measures the impact of health on engaging in social activities;
7. Role limitations due to emotional problems assess the impact of emotional problems performing daily activities;
8. General mental health evaluates the presence or severity of mental health indicators (e.g., anxiety and depression).

We used the “standard” version of the questionnaire, employing a 4-week time frame. All raw scale scores were linearly converted to a 0–100 scale, with higher scores indicating higher levels of functioning or well-being [8].

Sociodemographic and Medical Data

The formulation of question and answer options for sociodemographic data was based on the Dutch version of the Second European QOL Survey 2007 [12]. Question and answer options for retaining medical data were developed by the authors. Because not all questions were compulsory, total numbers of respondents might differ per question.

Results

Response

In total, we received 148 completed surveys (FtM = 65, MtF = 83), reflecting a response rate of 63% (FtM = 65%, MtF = 61%). The present analyses are based on completed SF-36 scales only, resulting in a final data set of 140 trans respondents, 77 of which were trans women and 63 were trans men. The internal validity was relatively good, with Cronbach’s alpha = 0.85 (0.84 for trans women and 0.87 for trans men).

Patients’ Characteristics

Patients’ medical and sociodemographic characteristics are summarized in Table 1. Hormonal therapy usually includes anti-androgens and estrogens preoperatively in trans women and estrogens only postoperatively; in trans men, this is usually testosterone treatment aimed at normal physiological male serum values. A one-way ANOVA

revealed an age difference between trans women and trans men ($P = 0.002$), indicating that trans women were significantly older than trans men. We also found that trans men and trans women differed on their civil status ($P = 0.007$), whereby trans women were more often divorced or widowed. Furthermore, trans men seem to have a partner more often compared with trans women, although this effect was at the trend level ($P = 0.063$). The time since the start of hormonal therapy was shorter for trans women compared with trans men ($P = 0.026$). Since 2010, trans women were more often on hormones than trans men, although the effect of this between-group difference was at trend level only ($P = 0.084$). The other social or medical indicators did not differ between both groups.

Health-Related QOL

Comparison of SF-36 Scores of Trans Population With General Dutch Sample

To compare the trans sample with the general population sample, we selected trans respondents who did not report trans-related surgery in the year of the study, nor started with hormone use in the year of the study only, to rule out the effect of recent changes in their transgender well-being.

As Table 2 shows, trans men scored lower at trend level on general health and SF, and significantly lower on VT and mental health when compared with a general Dutch sample of men, and trans women scored better at trend level on BP when compared with a general Dutch sample of women [8].

Differences Between Trans Men and Trans Women on SF-36

Because trans men were found to be significantly younger and were using hormones significantly longer when compared with trans women, and because the correlation between age and time since hormone use was not significant ($P = 0.714$), we analyzed the scores of the SF-36 subscales between trans men and trans women with age and time since hormone use as covariates. As Table 3 shows, trans women scored lower than trans men on the subscale PF ($P = 0.007$) and on the subscale general health ($P = 0.030$), but better than trans men on the subscale BP ($P = 0.033$).

Differences Within the Trans Sample According to Medical and Socioeconomic Indicators

Medical Indicators. Because specific medical interventions that take place within a gender reassignment process differ between men and women,

Table 1 Respondents' medical and sociodemographic characteristics (N = 140)

		Trans men	Trans women	Total (N, % of total)
Age—mean (SD)		37.03 (8.51)	42.26 (10.39)	39.89 (10.21)
Civil status	Single	36 (57.1%)	32 (42.1%)	68 (48.9%)
	Married/living together	24 (38.1%)	24 (31.6%)	48 (34.5%)
	Divorced	3 (4.8%)	15 (19.7%)	18 (12.9%)
	Widow	0	5 (6.6%)	5 (3.6%)
Engaged in relationship		38 (61.3%)	35 (45.5%)	73 (52.5%)
Education level*	Low	9 (14.8%)	19 (25%)	28 (20.4%)
	Middle	25 (41%)	27 (35.5%)	52 (38%)
	High	27 (44.3%)	30 (39.5%)	57 (41.6%)
Work status	Unemployed	6 (9.5%)	9 (11.7%)	15 (10.7%)
	Employed	46 (73%)	49 (63.6%)	95 (67.9%)
	Pensioned	1 (1.6%)	5 (6.5%)	6 (4.3%)
	Student	5 (7.9%)	2 (2.6%)	7 (5%)
	Unable to work	5 (7.9%)	12 (15.6%)	17 (12.1%)
Equalized household income [†]	Mean (SD)	1,377.51 (544.28)	1,550.27 (679.22)	1,470.83 (624.62)
	Lowest quartile	20 (31.76%)	23 (29.9%)	43 (53.8%)
	Highest quartile	13 (20.6%)	24 (31.2%)	37 (42.5%)
Hormone use		58 (96.7%)	70 (94.6%)	128 (95.5%)
Epilation		/	65 (86.7%)	
Speech therapy		2 (3.3%)	42 (56%)	44 (32.6%)
Surgical interventions	Voice altering surgery	2 (3.3%)	15 (20%)	17 (12.6%)
	Mastectomy	55 (91.7%)	/	
	Hysterectomy	55 (91.7%)	/	
	Metadoioplasty [‡]	8 (13.6%)	/	
	Phalloplasty	40 (67.8%)	/	
	Erection prosthesis	20 (50%)	/	
	Facial feminization surgery	/	14 (18.7%)	
	Adam's apple reduction	/	17 (22.7%)	
	Hair transplantation	/	3 (4%)	
	Breast augmentation	/	39 (52%)	
	Vaginoplasty	/	48 (64%)	
Start of hormone use in year of study		3 (5.2%)	10 (14.5%)	13 (10.2%)
Surgical intervention in year of study		7 (11.1%)	8 (10.4%)	15 (10.7%)
Interval since start hormonal therapy in years—mean (SD)		7.81 (6.84)	5.25 (5.95)	6.42 (6.48)
Interval since last operation in years—mean (SD)		5.15 (5.06)	3.96 (4.81)	4.55 (4.95)
Interval since genital surgery in years—mean (SD)		5.93 (4.49)	5.27 (5.94)	5.58 (5.29)

Unless otherwise specified, results are shown as N (% within gender)

*Low education level = middle school or junior high school level; middle education level = high school level; and high education level = college level

[†]Household incomes were equalized in order to make them comparable for households of different sizes and compositions according to the so-called modified Organisation for Economic Co-operation and Development scale, which assigns a value of one to the first member in the household, 0.5 to an additional member aged 14 years and over, and 0.3 to children aged under 14 years (Anderson et al. [12]: 6)

[‡]Five out of eight trans men with metadoioplasty later chose a phalloplasty

SD = standard deviation

Table 2 SF-36 scores compared with a general Dutch sample (Aaronson et al. [8])

	Trans men (N = 49)	Dutch men (N = 976)	<i>P</i> value	Trans women (N = 54)	Dutch women (N = 766)	<i>P</i> value
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	
PF	83.78 (18.58)	85.4 (21.0)	0.543	78.70 (25.94)	80.4 (24.2)	0.210
RP	76.53 (38.33)	78.7 (34.1)	0.694	72.69 (40.71)	73.8 (38.5)	0.620
BP	76.43 (22.55)	77.3 (22.7)	0.787	78.42 (28.42)	71.9 (23.8)	0.098 [‡]
GH	65.51 (21.71)	71.6 (20.6)	0.055 [†]	67.50 (21.50)	69.9 (20.6)	0.416
VT	60.61 (18.16)	71.9 (18.3)	<0.001 [†]	60.93 (20.58)	64.3 (19.7)	0.234
SF	80.10 (23.37)	86.0 (21.1)	0.084 [‡]	79.63 (19.62)	82.0 (23.5)	0.379
RE	82.31 (34.09)	85.5 (29.9)	0.516	75.31 (36.74)	78.5 (35.7)	0.526
MH	71.51 (16.40)	79.3 (16.4)	0.002 [*]	69.26 (20.78)	73.7 (18.2)	0.122

*Significant at the 0.05 level (two-tailed)

[†]Significant at the 0.01 level (two-tailed)

[‡]Significant at the trend level

PF = physical functioning; RP = role limitations due to physical health problems; BP = bodily pain; GH = general health perceptions; VT = vitality; SF = social functioning; RE = role limitations due to emotional problems; MH = general mental health; SF-36 = Short Form 36-Item Questionnaire; SD = standard deviation

Table 3 Trans men compared with trans women: an analysis of variance of SF-36 scales with age and time since hormone use as covariates

	Trans men (N = 58) Mean (SD)	Trans women (N = 63) Mean (SD)	F(1,125)
PF	83.88 (18.73)	77.50 (25.02)	4.28 [†]
RP	77.16 (38.13)	72.43 (39.86)	1.65
BP	75.40 (23.63)	75.66 (27.48)	3.02*
GH	66.03 (21.48)	64.19 (22.50)	3.07*
VT	61.12 (18.21)	59.71 (21.25)	0.17
SF	80.60 (23.08)	78.68 (19.56)	0.38
RE	81.61 (35.42)	74.51 (36.02)	0.69
MH	70.83 (17.14)	69.76 (21.56)	0.25

*Significant at the 0.05 level (two-tailed)

[†]Significant at the 0.01 level (two-tailed)

PF = physical functioning; RP = role limitations due to physical health problems; BP = bodily pain; GH = general health perceptions; VT = vitality; SF = social functioning; RE = role limitations due to emotional problems; MH = general mental health; SF-36 = Short Form 36-Item Questionnaire; SD = standard deviation

medical indicators are investigated within the male and female trans groups separately. We first present correlations between the QOL scores and the medical indicators, and then we look for differences between trans persons according to medical indicators.

We found a positive correlation between trans women’s time on hormone use and the subscales BP ($P = 0.021$) and general health ($P = 0.049$). For trans men, a negative correlation was found between their time of hormone use and the subscale role-physical ($P = 0.005$). A one-way ANOVA revealed that trans men who had undergone genital surgery (phalloplasty or metadoioplasty—a surgical technique where the clitoris, enlarged under influence of testosterone, is enhanced to create a micropenis) did not differ significantly from trans men without genital surgery. However, trans men with an erection prosthesis scored better on VT ($P = 0.028$) and better at trend level for role-emotional ($P = 0.086$) when compared with the trans men without a prosthesis. Within the group of trans women, we found no significant differences on any of the SF-36 subscales neither between those with breast augmentation when compared with those women without breast augmentation nor between trans women with vaginoplasty when compared with those without.

Socioeconomic Indicators. In the total trans sample, age was negatively correlated with PF ($P = 0.001$), BP ($P = 0.029$), and general health ($P = 0.020$). As Table 4 shows, educational levels revealed significant differences between low, middle, and high educated respondents on the subscales PF ($P = 0.001$), BP ($P = 0.010$), and general health

Table 4 One-way ANOVAs: SF-36 by categorical socioeconomic variables

	Educational level (N = 137)			Employed (N = 126)			Relationship (N = 139)			Equalized household income (N = 80)		
	Low (N = 28)	Middle (N = 52)	High (N = 57)	No (N = 31)	Yes (N = 95)	F(1,125)	No (N = 66)	Yes (N = 73)	F(1,138)	Lowest quartile (N = 43)	Highest quartile (N = 37)	F(1,79)
PF	66.43 (25.53)	84.42 (18.78)	83.42 (20.75)	63.71 (26.43)	87.21 (14.69)	38.82 [†]	76.06 (25.44)	84.59 (17.61)	5.36*	75.35 (26.04)	86.62 (13.80)	5.58*
RP	62.50 (41.67)	74.04 (39.28)	78.07 (39.27)	54.03 (43.83)	80.26 (35.90)	11.16*	70.45 (40.88)	76.71 (38.71)	0.86	62.79 (41.68)	86.49 (34.66)	7.50*
BP	62.76 (30.15)	77.75 (25.03)	80.13 (22.34)	66.82 (28.77)	79.42 (23.25)	6.08*	74.21 (27.86)	77.22 (23.54)	0.47	72.38 (25.32)	87.48 (16.48)	9.64*
GH	55.71 (24.03)	68.75 (19.60)	66.32 (22.39)	55.97 (24.78)	69.11 (19.54)	9.21*	60.76 (23.62)	68.97 (19.72)	4.99*	61.63 (23.27)	70.81 (19.56)	3.58*
VT	56.43 (21.42)	62.02 (19.44)	60.26 (20.71)	55.81 (24.16)	61.68 (19.40)	1.89	58.56 (21.08)	61.92 (19.47)	0.95	58.65 (18.28)	63.51 (22.11)	1.02
SF	78.57 (19.20)	78.37 (21.17)	78.07 (23.18)	72.18 (20.59)	80.66 (21.63)	3.68*	74.05 (23.95)	82.88 (18.22)	6.04*	76.74 (18.21)	81.08 (23.68)	0.86
RE	66.67 (41.57)	82.69 (33.33)	71.35 (39.06)	60.22 (44.24)	80.70 (33.18)	7.50*	67.68 (40.50)	81.74 (33.81)	4.97*	68.99 (42.66)	86.49 (27.73)	4.56*
MH	66.71 (24.17)	72.31 (19.12)	69.19 (17.74)	70.45 (22.69)	69.47 (18.86)	0.057	68.24 (21.55)	71.56 (17.63)	1.00	69.86 (20.33)	73.41 (18.38)	0.66

*Significant at the 0.05 level (two-tailed)

[†]Significant at the 0.01 level (two-tailed)

[‡]Significant at the trend level

PF = physical functioning; RP = role limitations due to physical health problems; BP = bodily pain; GH = general health perceptions; VT = vitality; SF = social functioning; RE = role limitations due to emotional problems; MH = general mental health; SF-36 = Short Form 36-Item Questionnaire; ANOVA = analysis of variance

($P = 0.035$). Further post hoc analysis revealed that the differences were situated between low and middle ($P = 0.001$) and between low and high ($P = 0.002$) educated respondents on the subscale PF; between low and middle ($P = 0.036$) and between low and high ($P = 0.010$) educated respondents on the subscale BP; and between low educated trans respondents and middle educated persons on the subscale general health ($P = 0.035$).

Furthermore, trans persons who were employed scored better on PF ($P < 0.001$), role-physical ($P = 0.001$), BP ($P = 0.015$), general health ($P = 0.003$), SF ($P = 0.058$), and role-emotional ($P = 0.007$) compared with unemployed trans persons (see Table 4). Subjects who have a relationship have better scores on PF ($P = 0.022$), general health ($P = 0.027$), SF ($P = 0.015$), and role-emotional ($P = 0.027$) compared with those who are single. Trans respondents in the highest income quartile scored better on PF ($P = 0.021$), role-physical ($P = 0.008$), BP ($P = 0.003$), general health ($P = 0.062$), and role-emotional ($P = 0.036$) compared with those who are in the lowest income quartile.

Discussion

In this study, we wanted to enhance the understanding of the experienced QOL of trans persons by comparing their QOL with that of the general population, by investigating gender differences, and by investigating differences in medical as well as social positions. This study has the limitation that our sample was restricted in its respondent set which was selected from one gender identity clinic's patient database at a university hospital. Nevertheless, we believe that this limited respondent set has the advantage that all respondents were screened and treated by the same professionals and followed a similar procedure [13]. Therefore, we can assume minimal interference of quality of treatment or caregivers with measured quality of care. A second shortcoming lies in the absence in data on the QOL of the 37% nonresponders.

When comparing trans persons with the general population sample, we found that trans women did not significantly differ from the general female population on health-related QOL subscales, which confirms earlier findings of Weyers et al. [6]. Interestingly, trans women scored better at trend level for BP. These positive findings are in contrast with Ainsworth and Spiegel who found lower mental health-related QOL in American trans women compared with the general female population [4]. These current

good overall QOL results for trans women can partly be explained by the high and stable patient satisfactory level, as indicated by former follow-up studies of our center [6,13]. Nevertheless, within the group of trans men, we did find diminished QOL scores for SF and general health, and significantly diminished QOL scores for VT and mental health-related QOL when compared with the general Dutch male sample. The reduced mental health-related QOL is in line with earlier findings in the trans men population [3,7], but reasons remain unclear. One hypothesis is that the mental burden associated with additional unforeseen surgery due to complications may have a long time effect on the mental health of trans individuals. Although recent literature indicates that the number of surgical interventions for reasons of corrections or complications may be high in trans men [14] as well as in trans women [15], we can hypothesize that trans men suffer more from this burden compared with trans women. Another hypothesis to explain the consistent findings of trans men having a diminished mental health-related QOL is that these findings represent an increased rate of underlying depressive disorders for trans men compared with male controls. This issue needs further exploration and clarification.

Unfortunately, a shortage of pre-hormonal trans respondents and the cross-sectional design of the study did not allow us to compare the effect of hormonal therapy on QOL, so we cannot confirm the findings of Newfield et al. [3]. In addition, the data are limited by their cross-sectional design and—as such—in making causal inferences. Analysis of correlations of SF-36 scales with the time since hormonal therapy for trans women showed positive correlations with subscales BP and general health, whereas for trans men, we found a negative correlation with the subscale role-physical, possibly a spurious finding. Furthermore, we found no significant differences between the pre- and post-genital surgery groups (male or female) or between the trans women who did or did not undergo surgical breast augmentation. Of course, estrogen therapy may induce sufficient breast growth, although this may be highly variable individually, creating the need for further surgical intervention in some cases, where others remain satisfied [16]. Therefore, we cannot confirm the findings of Ainsworth and Spiegel that surgical treatments in a group of trans women were associated with improved QOL [4]. Significant differences were only found between the trans men with an erection prosthesis compared with those without an erec-

tion prosthesis, whereby the former scored significantly better on VT and better at trend level for role-emotional when compared with those without an erection device. The findings of Wierckx et al. in a group of post-GRS trans men (from the same clinic) revealed no difference with or without erection prosthesis [7]. This might indicate that the (more recent) positive effects of receiving an erection prosthesis can fade over time.

The lack of significant differences between pre-genital and postgenital surgery groups could be partly explained by the circumstance that the pre-genital surgery group could be fairly sure that they were on track for genital surgery in the future. Presurgical individuals with no hope or prospect of surgery may have a different mental health profile. Future research in the QOL of trans persons should ideally be a follow-up research, where the QOL can be followed throughout the transition process, and the impact of undergoing or being denied surgery can be measured and compared. Another explanation lies in the experience and quality of caregivers, and in the state funded care (costs of psychiatric consultations, hormonal therapy, genital surgery, and breast augmentation or removal are reimbursed, whereas costs of facial hair removal, FFS, and speech therapy are not covered). Our center provides at least six contacts with psychologists or psychiatrists during the diagnostic phase, contacts that are kept on a 3- to 4-monthly basis when hormonal therapy has started, and before and after surgical interventions take place. Surgery is usually performed 2 years after start of hormones. We believe that these factors can lead to similar QOL between trans and general samples and between pre- and postoperative groups. Undergoing genital surgery then no longer has the huge impact as is shown by Ainsworth and Spiegel [4] but becomes just another medical choice that trans persons make in their search for good QOL. On the other hand, it has been shown that postsurgical satisfaction is highly depended on the premise of good quality genital surgery performed [13]. Because of the far reaching level of care and social security system, our results are not transposable to countries not offering a similar infrastructure and care.

Specific social indicators revealed much clearer impact than medical indicators. For the first time, we were able to compare trans men with trans women, and in contrast with the expectation that women would score lower than men on all SF-36 scales [8], our analysis showed more nuanced results. Trans women did score lower than trans

men on the subscales PF and general health but scored better on the subscale BP and showed no significant or trend differences on the other subscales. Trans women also had better scores at trend level on BP when compared with a general Dutch sample of women [8]. Further research will need to explain the salient good scores on BP within the group of trans women. Age was negatively correlated with the physical health-related QOL subscales, confirming the findings of Aaronson et al. that older respondents score substantially lower on those SF-36 scales which are most sensitive to differences in PF and well-being (PF, BP, and general health) [8]. Furthermore, our findings indicate a strong influence of the socioeconomic position: transgender individuals who were older, low educated, unemployed, had a low household income, or were single showed significantly reduced QOL scores compared with those who were young, high educated, employed, had a high household income, or had a partner, respectively. Whereas Weyers et al. and Wierckx et al. found positive effects of having a partner on the experienced QOL of trans individuals [6,7], in general, these findings are in line with previous European findings in general populations [12] and in other patient groups [17]. They underline the importance of providing qualitative accessible care for those in more vulnerable socioeconomic positions.

Conclusions

The current research suggests that analyzing QOL through sociodemographic and medical aspects in the lives of trans individuals leads to a better understanding of their QOL outcomes. Future research should further explore the intertwining complementary influences of objective social and economic indicators. For practitioners and clinicians, it seems that paying attention to certain sociodemographic characteristics is of no less importance than providing qualitative care for enhancing the overall QOL of trans persons.

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