Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 6, 2021, Pages. 4608 - 4614
Received 25 April 2021; Accepted 08 May 2021.

Quality of Life, Suicidal Attempt and Satisfaction in Gender Dysphoria Individuals Undergone Sex Reassignment Surgery

Sara Sadeghipour Meybodi[1], Azadeh Mazaheri Meybodi[2*]

[1]Taleghani Hospital Research Development Committee and Department of Psychiatry, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

[2*]Taleghani Hospital Research Development Committee and Department of Psychiatry, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran. E-mail: mazaheri.azadeh@yahoo.com

ABSTRACT

Introduction: Gender dysphoria (GD) refers to a condition that a person suffers from incongruence between anatomical appearance and gender identity. The GDs have high prevalence of psychiatric comorbidities whole the life, while sex reassignment surgery (SRS) is an effective procedure on them.

Methods: A cross-sectional study 44 GD individuals who were underwent at least one sex reassignment surgery were evaluated during 8-months period from May 2019 to December 2019. Quality of life (QoL) with the SF-36 questionnaire was measured and the rate of satisfaction and suicidal attempts was attained.

Results: Forty-four GDs participated in this study, including 10 (22.7%) transwomen and 34 (77.3%) transmen. Total mean score of QoL is 79.30 (±14.72) with no difference between transmen (78.76 ±15.11) and transwomen (81.11 ± 13.90) (p=0.730). Three (30%) of transwomen and 12 (35.3%) of transmen had history of suicidal attempts before SRS and no suicidal attempt was declared after SRS. After surgery, all patients were 100% satisfied that they had changed their gender. The average satisfaction with the quality of surgery was 91 ± 8.76 among transwomen and 82.79 ± 22.40 among transmen. After SRS, all of the individuals had experienced orgasm. Generally, 39 people (88.6%) had normal sexual desire and 5 people (11.4%) had low sexual desire after surgery.

Conclusions: Overall, SRS has positive effect on GD individuals. It helps GDs to have good QoL and high rate of satisfaction and reduction in suicidal attempts.

KEYWORDS

Quality of Life, Gender Dysphoria, Suicidal Attempts, Satisfaction, Transgender.

Introduction

Gender dysphoria (GD) refers to a condition that a person suffers from incongruence between anatomical appearance and gender identity. It is a psychological distress experiencing circumstance, as the lifetime rate of suicidal ideation is high among them and it is not related to sex, age or education status. Because there has been remarkable increase in the number of individuals with GD and need to medical assistance during the last decade, the necessity of providing critical support for them is the fact that should be considered in health care services. Although there is controversy in assessment and treatment, sex reassignment surgery (SRS) is an important procedure that can be not only helpful but also harmful [1-4].

It has been shown that individuals with GD have high prevalence of psychiatric comorbidities whole the life, nevertheless, SRS is an effective procedure on them and it leads to have psychosocial improvements in transgender persons because it helps transgender individuals to perform their preferable role in society [5, 6].

The major reason for undergoing SRS is to attain more appropriate quality of life (QoL) in different domains. Numerous studies revealed that transgenders have lower QoL than other members of society in the most dimensions. This community needs further focus to be understood and helped to raise mental and physical health and QoL [7-10]. It is proved that rate of psychological disorders such as depression, anxiety and suicide among transgender people, even after the surgery, is more than the public, according to previous articles SRS is a highly advisable procedure to provide better mental health and achieve remarkable reduction in such sort of disorders [11, 12].

However, a survey in Denmark reported no significant differences in psychiatric morbidities before and after SRS. It shows that the efficacy of this procedure on psychological disorders is still in question [13]. Fortunately, studies have recorded high level of satisfaction among transgenders who have undergone SRS [14, 15]. Moreover, one of the most important factors that is considered as a psychiatric emergency is suicidal behaviors. Suicidal rate is high among

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 6, 2021, Pages. 4608 - 4614
Received 25 April 2021; Accepted 08 May 2021.

transgenders, while it shows real decrease after SRS [16].
Hence, The high prevalence of depression and suicidal propensities among transgender persons appears to be very affected by societal stigma, absence of social support and violence-related issues which need major complete investigation and incumbent mental health counseling, tension management, addressing drug abuse, providing them living possibilities, and so on as part of the intervention[17, 18]. Thus, the aim of this study is to investigate QoL and satisfaction following SRS in transgenders and compare the rate of suicidal attempt before and after SRS.

Materials and Methods

In this cross-sectional study, 44 gender dysphoria persons, referring to the Welfare Organization, Taleghani Hospital of Tehran in Iran, and the Tehran Sexual Boredom Association, who had been underwent at least one sex reassignment surgery were evaluated during 8-months period from May 2019 to December 2019.

The inclusion criteria were (a) People who have had any gender reassignment surgery (partial or complete), (b) the surgery was performed at the age of over 18, (c) at least 6 months have passed since their surgery and (d) have consented to participate in the study. Exclusion criteria was those with major physical illnesses and those who did not have desire to participate in the study.

In addition,before entering the study, participants filled out informed consent form. All patients' data were strictly confidential. There was no change in the diagnostic and treatment process of the patients, no cost was imposed on the patients. Permission was obtained from the Vice Chancellor for Research and the Code of Ethics from the Ethics Committee of Shahid Beheshti University of Medical Sciences (IR.SBMU.MSP.REC.1397.308).

Demographic information and other data was collected through interview. It included age, gender, marital status, education, occupation, health insurance, income adequacy, having a partner, previous or current history of self-harm, type of surgery performed, time elapsed since the first surgery, satisfaction with the quality of surgery, satisfaction with gender reassignment, sexual desire and orgasm.

The information required for quality of life was obtained based on the SF-36 quality of life questionnaire (Medical Outcomes Study Short Form – 36) completed by the study participants themselves. This questionnaire is general, standard and culture-free, and is one of the most popular questionnaires related to quality of life.

We used the Persian version of SF-36 that its validity and reliability has been tested in Iran [19]. It consists of 36 questions grouped into 8 domains physical functioning, social functioning, role limitations related to physical problems, role limitations related to emotional problems, mental health, vitality, bodily pain and general health perception. A score ranging from 0 (indicating the worse health status) to 100 (indicating the best health status) is assigned for each domain. Domain scores can be summarized into a Physical Component Score and Mental Component Score. For these two summary scales, a score below 50 reflects a worse quality of life compared to the average of the general population [20].

Mean and standard deviation were used to represent quantitative data and frequency and percentage were used to represent qualitative data. The statistical tests of Chi-squared, independent T (Mann-Whitney) and analysis of variance (Kruskal-Wallis) were used to analyze the data. Significant levels for statistical tests were considered 0.05 and SPSS v.16 statistical software was used.

Satisfaction with sexual functions and surgery, was measured by visual analogue scale (VAS) with a horizontal line of 100-mm long, ranging from no satisfaction to extreme satisfaction by making a mark on the line and convert it to a number ranging from 0 to 100 points [21].

Results

A total of 44 GD individuals participated in this study, including 10 (22.7%) transwomen and 34 (77.3%) transmen that the average age was 25.10 (±6.082) years and 28.15 (±6.066) respectively with no significant statistical difference (p=0.299) (Table 1). The mean duration of time that spent from the surgery was 3.02 ± 2.34 years with no

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 6, 2021, Pages. 4608 - 4614
Received 25 April 2021; Accepted 08 May 2021.

difference between two genders (p=0.649). All of transwomen 10 (100%) and 11 (32.4%) of transmen had been undergone complete sex reassignment surgery and for 23 (67.6%) of transmen partial sex reassignment surgery had been done (Table 1).

90% of transwomen did not have any academic degrees, while 82.3% of transmen had academic education (p <0.001). None of the transwomen were employed, but 27 (79.4%) individuals of transmen were employed. The employment rate of transmen was significantly higher than transwomen (p <0.001). Income level of 30 (88.3%) of transmen was moderate and high, while 8 (80%) of transwomen were identified as low income statue. This indicated that transmen had significantly higher income rate than transwomen (p <0.001). The number of six (60%) of transwomen and 25(73.5%) of transmen had health insurance (p=0.410).

The rate of marriage was low among participants. Nine (90%) of transwomen and 32 (94.1%) of transmen were not married. However, approximately half of either gender had a partner. No differences were seen in both comparisons between each other gender (p=0.999 and p=0.427) (Table 1).

Total mean score of QoL is 79.30 (±14.72) with no difference between transmen (78.76 ±15.11) and transwomen (81.11 ± 13.90) (p=0.730). Three highest rate of domains of QoL are for "role limitation due to physical health", "physical functioning" and "bodily pain" with mean scores of 88.64 (±22.53), 88.30 (±13.68) and 85.63 (±15.67) respectively. The lowest QoL scores were for "Role Limitation due to Emotional Problems" and "Mental Health" with mean scores of 69.70 (±38.59) and 70.91 (±22.19) respectively (Table 2).

Totally, 15 (34.1%) individuals had history of suicidal attempts before SRS; this history was stated in 3 (30%) transwomen and 12 (35.3%) transmen. The proportion of transmen and transwomen who had suicidal attempts before SRS had no statistically significant differences (p = 0.756). No suicidal attempt was declared in any of the individuals after SRS.

After surgery, all GDs were pleased to have undergone SRS and made their physical appearance more consistent with their gender identity. Furthermore, satisfaction with the quality of surgery was 91 ± 8.76 among transwomen and 82.79 ± 22.40 among transmen. There was no remarkable difference in satisfaction with quality of surgery between two genders (p = 0.629), (Table 3).

All of the individuals declared that they had the experience of orgasm. Generally, 39 (88.6%) of whole transgenders had normal sexual desire in comparison with 5 (11.4%) of them that had low sexual desire after surgery. Among transwomen, 8 (٪80) had normal sexual desire and 2 (٪20) had low sexual desire, and among transmen, 31 (91.2%) had normal sexual desire versus 3 (8.8%) that had low sexual desire. Statistically, transwomen and transmen had no significant differences in the rate of sexual desire (p = 0.328).

Discussion

It has been shown that Transgenders are in the risk of various mental-social difficulties including depilation from the family and counterparts, harassment and offensive, trauma, insult, inconvenient housing, lack of financial protection, training and legal difficulties[22]. In addition, consciousness of the increased prevalence of depression, anxiety, and suicidal attempt among these individuals can construct healthcare suppliers to foretaste and respond suitability to their presentation[23]. So, the aim of our study was to investigate QoL, suicidal attempt and satisfaction following SRS in transgenders.

Our results showed thattotal mean score of QoL was 79.30 (±14.72) andthere was no difference between transmen and transwomen. Also, 15 (34.1%) individuals had history of suicidal attempts before SRS and no significant difference was observed between transmen and transwomen. After surgery, all GD patients were satisfied that they had undergone SRS and that their physical appearance was consistent with their gender identity. All of the individuals also experienced orgasm.

Main purpose of medical procedures and health care services is to elevate QoL of people [24]. Previous studies have shown that SRS improves QoL of individuals with GD and help them to have stable relationships, better adjustment

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 6, 2021, Pages. 4608 - 4614
Received 25 April 2021; Accepted 08 May 2021.

and happiness [25, 26]. Castellano et al. proclaimed that QoL in transgenders after SRS was similar to control groups [7].Motmans et al. reported that QoL is under the influence of different factors and is lower in transgenders who were older, low educated, unemployed, single and lower income persons [27]. Furthermore, Auer et al. reported that QoL did not differ notably differ between two genders [28].But Yuanshu et al. represented that transwomen had considerably higher rate of QoL than transmen [29]. In Our study transmen were employed more and were higher in education and income, but no significant differences in QoL were detected to transwomen.

It is notable that long-term studies have shown reduction in QoL in long periods of time after SRS. In a survey, QoL after SRS analyzed for 5 years and it decreased during this period, even it became similar to preoperative time. In another study, QoL in transgenders after fifteen years post reassignment surgery was measured and significant decrease was detected [30, 31].

Mental health has significant correlation with other domains of QoL and it is a criterion that showed great promotion in transgenders following SRS [32]. There is controversy in mental health over whether transmen have higher rate or transwomen. Some researches proclaimed that mental health is worse in transwomen [33], while some others reported no difference [34]. Our result also showed that there was similar rate of mental health in two GD persons after SRS.

A valuable factor that should be considered about transgenders seriously is high rate of suicidal attempt that has been recorded throughout the whole life, especially in adolescence. However, the point is that there is significant decline in suicide following SRS, as studies revealed that comparisons declare no difference from the general population [16, 35]. In an article, Özata Yıldızhan et al. proclaimed that rate of suicidal attempt was not related with gender and after SRS no suicidal attempt was happen in participants [36]. In our study, one third of both genders had history of suicidal attempt that indicate it is a common phenomenon among them. Fortunately, there were no suicide attempts following SRS.

Previous studies have revealed that large number of GD people were dissatisfied with their sexual life before SRS [37]. In other hand, significant improvement was detected after SRS in both transmen and transwomen [6]. Although sexual function seemed to be good enough in transmen, they reported lower rate of quality of sexual life than transwomen [7, 38]. In our investigation both genders had high rate of quality of sexual life and no remarkable significant was recorded between two genders.

Another very important indicator of the effect of SRS on transgender's life is satisfaction. In preceding studies, high rate of satisfaction was reported among GD individuals following SRS that was because of the termination of incongruity between their gender identity and physical body appearance. Satisfaction with physical and functional performance was high in both genders and no difference was perceived between transmen and transwomen [14, 15, 38-40]. In the present study, participants disclosed high rate of satisfaction with their quality of surgery and they did not regret it at all. Both genders were highly satisfied and no difference was identified between transmen and transwomen.

Overall, our findings demonstrated that service providers and policy makers urgently require to address the mental and physical health needs of transgenders, particularly younger ones. Although this study had many outcomes pertinent to the better understanding transgender QoL, suicidal attempt and satisfactionin Iranian transgenders, it has some limitations.Our study was limited to transgenders who are referred to Taleghani Hospital of Tehran, thus, our data cannot be generalized to other transgender populations.The relatively small sample size in this study is a hidden limitation. Absence of access to some transgenders after surgical intervention was another limitation of this study.Therefore, it is suggested that additional studies with larger sample sizes be performed with the standardized control group.

Conclusion

Overall, SRS has positive effect on GD individuals. It helps GDs to have good QoL and high rate of satisfaction and reduction in suicidal attempts.

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 6, 2021, Pages. 4608 - 4614
Received 25 April 2021; Accepted 08 May 2021.

Acknowledgment

This article is part of a larger residency research dissertation for the degree of specialty in psychiatry, approved by the Vice Chancellor to Research in Shahid Beheshti University of Medical Sciences, Tehran, Iran, coded 157.

Conflict of Interest

All authors declare that there is no conflict of interest.

Funding Source

There is no funding source in this study.

Author Contributions

Sara Sadeghipour and Azadeh Mazaheri designed and directed the project; Sara Sadeghipour and Seyed Saeid Noorani performed the experiments; Azadeh Mazaheri and Niloufar Mahdavi analyzed spectra; Sara Sadeghipour and Seyed Saeid Noorani made the simulations; Azadeh Mazaheri and Niloufar Mahdavi developed the theoretical framework; Sara Sadeghipour wrote the article.

References

[1] Roberto, L.G., Issues in diagnosis and treatment of transsexualism. *Arch Sex Behav,* 1983. 12(5): p. 445-73.

[2] Bonifacio, J.H., et al., Management of gender dysphoria in adolescents in primary care. *CMAJ,* 2019. 191(3): p. E69-E75.

[3] Kyriakou, A., N.C. Nicolaides, and N. Skordis, Current approach to the clinical care of adolescents with gender dysphoria. *Acta Biomed,* 2020. 91(1): p. 165-175.

[4] Terada, S., et al., Suicidal ideation among patients with gender identity disorder. *Psychiatry Res,* 2011. 190(1): p. 159-62.

[5] Smith, Y.L., et al., Sex reassignment: outcomes and predictors of treatment for adolescent and adult transsexuals. *Psychol Med,* 2005. 35(1): p. 89-99.

[6] De Cuypere, G., et al., Sexual and physical health after sex reassignment surgery. *Arch Sex Behav,* 2005. 34(6): p. 679-90.

[7] Castellano, E., et al., Quality of life and hormones after sex reassignment surgery. *J Endocrinol Invest,* 2015. 38(12): p. 1373-81.

[8] Valashany, B.T. and M. Janghorbani, Quality of life of men and women with gender identity disorder. *Health Qual Life Outcomes,* 2018. 16(1): p. 167.

[9] Newfield, E., et al., Female-to-male transgender quality of life. *Qual Life Res,* 2006. 15(9): p. 1447-57.

[10] Bockting, W., et al., Adult development and quality of life of transgender and gender nonconforming people. *Curr Opin Endocrinol Diabetes Obes,* 2016. 23(2): p. 188-97.

[11] De Cuypere, G., et al., Long-term follow-up: psychosocial outcome of Belgian transsexuals after sex reassignment surgery. *Sexologies,* 2006. 15(2): p. 126-133.

[12] De Vries, A.L., et al., Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics,* 2014. 134(4): p. 696-704.

[13] Simonsen, R.K., et al., Long-term follow-up of individuals undergoing sex reassignment surgery: Psychiatric morbidity and mortality. *Nord J Psychiatry,* 2016. 70(4): p. 241-7.

[14] Jokic-Begic, N., A. Lauri Korajlija, and T. Jurin, Psychosocial adjustment to sex reassignment surgery: a qualitative examination and personal experiences of six transsexual persons in croatia.

ScientificWorldJournal, 2014. 2014: p. 960745.

[15] Lawrence, A.A., Patient-reported complications and functional outcomes of male-to-female sex reassignment surgery. *Arch Sex Behav*, 2006. 35(6): p. 717-27.

[16] Yuksel, S., et al., A Clinically Neglected Topic: Risk of Suicide in Transgender Individuals. *Noro Psikiyatr Ars*, 2017. 54(1): p. 28-32.

[17] UNDP, V., Hijras/Transgender Women in India: HIV. *Human Rights and Social Exclusion.* UNDP, India, 2010: p. 1-15.

[18] Virupaksha, H., D. Muralidhar, and J. Ramakrishna, Suicide and suicidal behavior among transgender persons. *Indian Journal of Psychological Medicine*, 2016. 38(6): p. 505-509.

[19] Montazeri, A., et al., The Short Form Health Survey (SF-36): translation and validation study of the Iranian version. *Qual Life Res*, 2005. 14(3): p. 875-82.

[20] Ainsworth, T.A. and J.H. Spiegel, Quality of life of individuals with and without facial feminization surgery or gender reassignment surgery. *Qual Life Res*, 2010. 19(7): p. 1019-24.

[21] Voutilainen, A., et al., How to ask about patient satisfaction? The visual analogue scale is less vulnerable to confounding factors and ceiling effect than a symmetric Likert scale. *J Adv Nurs*, 2016. 72(4): p. 946-57.

[22] Arcelus, J., et al., Prevalence of Transsexualism: A systematic review and meta-analysis. *European Psychiatry*, 2015. 30(6): p. 807-815.

[23] Day, D.S., J.J. Saunders, and A. Matorin, Gender Dysphoria and Suicidal Ideation: Clinical Observations from a Psychiatric Emergency Service. *Cureus*, 2019. 11(11).

[24] Abedzadeh Kalarhoudi, M., et al., Assessment of quality of life in menopausal periods: a population study in kashan, iran. *Iran Red Crescent Med J*, 2011. 13(11): p. 811-7.

[25] Cardoso da Silva, D., et al., WHOQOL-100 Before and After Sex Reassignment Surgery in Brazilian Male-to-Female Transsexual Individuals. *J Sex Med*, 2016. 13(6): p. 988-93.

[26] Murad, M.H., et al., Hormonal therapy and sex reassignment: a systematic review and meta-analysis of quality of life and psychosocial outcomes. *Clin Endocrinol (Oxf)*, 2010. 72(2): p. 214-31.

[27] Motmans, J., et al., Female and male transgender quality of life: socioeconomic and medical differences. *J Sex Med*, 2012. 9(3): p. 743-50.

[28] Auer, M.K., et al., High impact of sleeping problems on quality of life in transgender individuals: A cross-sectional multicenter study. *PLoS One*, 2017. 12(2): p. e0171640.

[29] Zou, Y., et al., Documenting an epidemic of suffering: low health-related quality of life among transgender youth. *Qual Life Res*, 2018. 27(8): p. 2107-2115.

[30] Lindqvist, E.K., et al., Quality of life improves early after gender reassignment surgery in transgender women. *Eur J Plast Surg*, 2017. 40(3): p. 223-226.

[31] Kuhn, A., et al., Quality of life 15 years after sex reassignment surgery for transsexualism. *Fertil Steril*, 2009. 92(5): p. 1685-1689 e3.

[32] Fallahtafti, E., et al., Happiness and Mental Health in Pre-Operative and Post-Operative Transsexual People. *Iran J Public Health*, 2019. 48(12): p. 2277-2284.

[33] Reisner, S.L., et al., Global health burden and needs of transgender populations: a review. *Lancet*, 2016. 388(10042): p. 412-436.

[34] Dhejne, C., et al., Mental health and gender dysphoria: A review of the literature. *Int Rev Psychiatry*, 2016. 28(1): p. 44-57.

[35] Clements-Nolle, K., R. Marx, and M. Katz, Attempted suicide among transgender persons: The influence of gender-based discrimination and victimization. *J Homosex*, 2006. 51(3): p. 53-69.

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 6, 2021, Pages. 4608 - 4614
Received 25 April 2021; Accepted 08 May 2021.

[36] Ozata Yildizhan, B., et al., Effects of Gender Reassignment on Quality of Life and Mental Health in People with Gender Dysphoria. *Turk Psikiyatri Derg*, 2018. 29(1): p. 11-21.

[37] Bartolucci, C., et al., Sexual quality of life in gender-dysphoric adults before genital sex reassignment surgery. *J Sex Med*, 2015. 12(1): p. 180-8.

[38] Wierckx, K., et al., Quality of life and sexual health after sex reassignment surgery in transsexual men. *J Sex Med*, 2011. 8(12): p. 3379-88.

[39] Zimmermann, A., et al., Transsexuals' life satisfaction after gender transformation operations. *Chirurg*, 2006. 77(5): p. 432-8.

[40] Papadopulos, N.A., et al., Quality of Life and Patient Satisfaction Following Male-to-Female Sex Reassignment Surgery. *J Sex Med*, 2017. 14(5): p. 721-730.