

Original Research Article

DOI: <http://dx.doi.org/10.18203/2349-2902.isj20203765>

Quality of life after gender reassignment surgery in transwomen

Nivethaa, Saravanakumar Subbaraj*, Tirou A. Tirrougnanassambandamourty

Department of General Surgery, Mahatma Gandhi Medical College and Research Centre, Puducherry, India

Received: 07 August 2020

Revised: 18 August 2020

Accepted: 19 August 2020

***Correspondence:**

Dr. Saravanakumar Subbaraj,
E-mail: drsksurgeon@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Gender dysphoria is a condition in which there is discrepancy between a person's gender identity and that person's sex assigned at birth. Gender reassignment surgery (GRS) has an important role in alleviating the distress caused by gender dysphoria and it is medically necessary. The literature on quality of life (QoL) of transgenders post-GRS is limited in India.

Methods: This is a prospective study on transgender women who volunteered to undergo male to female (MtF) GRS from March 2015 to August 2017. The demographic details and the surgical complications were registered. The Quality of life using the WHOQOL-BREF questionnaire was measured both before and a year after the surgery. The data were compared and presented.

Results: A total of 62 GRS were performed during the study period. In that, 43 patients are literate (69.35%) and only 31.93% are employed in a socially respectable position. Our study shows significant improvement in physical, psychological and social health domains after the Surgery. Highest improvement was observed in the psychological health domain. There were no major complications observed in our study group.

Conclusions: The surgical management improved the QOL in the first three domains of WHOQOL-BREF instrument namely physical health, psychological health and social relationship. Among these three domains, there is a significant improvement in psychological health. Hence, GRS has an important role in relieving the psychological distress caused by gender dysphoria and significantly improves the quality of life postoperatively.

Keywords: Gender dysphoria, Gender reassignment surgery, Male to female, Transwomen, QoL

INTRODUCTION

Gender dysphoria is a condition in which there is a discrepancy between a person's identified gender and that person's gender assigned at birth (and the associated gender role and/or primary and secondary sex characteristics).¹ This discrepancy gives immense distress to the patient and they will have a strong desire to undergo medical and surgical treatment to align the body in a way that's closer to one's identified gender. The prevalence of Gender dysphoria is approximately 1.67 per 100,000 born males (i.e., about 1 in every 60,000) and 1

per 100,000 born females.² The Transgender community in India includes Hijras, Eunuchs, Kothis, Aravanis, Jogappas, and Shiv-Shakthis etc., In the Census of 2011, data of transgender were collected in the category of "Others" under Gender with details related to their employment, literacy, and caste. The census revealed the total population of transgender to be around 4.88 lakh, while the transgender activists estimate the numbers to be six to seven times higher.³ The annual incidence of gender dysphoria appears to be increasing worldwide.

The Supreme Court of India passed a very important judgment in April 2014⁴ stating one's sexual orientation as an integral part of personality, dignity, and freedom and identified transgender as a third gender. In the National Legal Services Authority (NLSA) versus Union of India case, the apex court provided the transgender (Hijras and Eunuchs) a legal identity along with seven other directions. After the NLSA judgment; various courts passed favourable orders for the transgender community. Generally, transgenders have a lower physical and mental quality of life (QoL) when compared to the general population. There are various factors for this disparity, mainly the unemployment, lack of education and the social discrimination. The role of surgical intervention improving the QoL is not very well studied.⁵⁻⁸ Very few studies are available in the literature about QoL of transgender, especially after the surgery and the Indian scenario is still worse. This is because of paucity of awareness about this marginalized group among the general population, policymakers and health care workers.⁹ Quality of life after the Gender Reassignment Surgery was not evaluated in India till now.

Gender reassignment surgery (GRS) plays a pivotal role in relieving their psychological discomfort. Techniques for Male to Female (MtF) GRS are well documented in the literature. The minimum goals of the proposed surgery is to create a perineogenital complex as feminine in appearance and function as possible and free of poorly healed scars. The Penile skin inversion technique is considered the standard technique for creating vaginoplasty in MtF transsexuals and can be done with a low complication rate.¹⁰⁻¹² Indian laws are silent on the GRS though it has been legalized in various countries such as the United Kingdom 1967 and the U.S.A. since 1972. The patient faces issues of name change for identity cards, birth certificates, school and college certificates postoperatively.¹³

Aim of the study

Our aim in this study was to analyze and to follow the quality of life of transgender women undergoing Gender Reassignment Surgery. We intend to prove the following hypothesis: quality of life improves after gender reassignment surgery.

METHODS

This is a prospective observational study on transwomen who volunteered to undergo male to female GRS from March 2015 to August 2017 at Mahatma Gandhi medical college and research centre, Puducherry. All clients who have diagnosed to have Gender Dysphoria by a team of Psychiatrists, and willing to undergo Gender Reassignment Surgery, were included in this study. Clients with other mental illness like depression, bipolar disorder and substance abuse were excluded from this study. The demographic profile along with quality of life was analyzed. We used the WHOQOL-BREF instrument

for assessing QoL.¹⁴ The WHOQOL-BREF instrument comprises 26 items, which measure the following broad domains: physical health, psychological health, social relationships, and environment. Scoring for each item will be calculated between one as poorly satisfied and five as extremely satisfied. The maximum possible score is 130. The WHOQOL-BREF is a shorter version of the original instrument that may be more convenient for use in large research studies or clinical trials. The quality of life questionnaire was distributed preoperatively and one year after surgery. Informed consent was obtained from all participants and the study was approved by the institutional ethical committee. We offered single stage surgery for all clients and we used penile skin inversion technique for creating neovaginal canal. Clients were asked to fill a separate custom-made questionnaire to assess the satisfaction of surgery.

Statistical analysis

Descriptive statistics were done for all data and were reported in terms of mean values standard deviations and confidence intervals were calculated. Continuous variables were analyzed with the unpaired, paired t-test and ANOVA. Categorical variables were analyzed with the one sample z test for proportions, Chi-Square test and Fisher exact test. Statistical significance was taken as $p < 0.05$. The preoperative and postoperative scores of the four dimensions in WHOQOL-BREF were calculated for individual and compared. Also, the preoperative score was compared with the general population. Main outcome measures were mean scores on the different dimensions of the WHOQOL-BREF questionnaire.

RESULTS

Totally 62 transgender women were included in this study. All of them completed the questionnaire preoperatively and one year after the surgery. For 12 clients, the post-operative questionnaire was received through social media due to logistical reasons. The mean age of participants was 21.5 (Table 1). Three patients had co-morbid conditions like type 2 diabetes mellitus, Hepatitis B and seizure disorder. The above said conditions were well optimized before the surgery. Out of 62 patients, 74.1% were from South India predominantly from Tamil Nadu and Puducherry, and 25.81% from North India. Our study group, 43 patients are literate (69.35%) and 19 are illiterate (30.65%) (Table 2). Only 31.93% are employed in a socially respectable position, all others fall under low socio-economic status and their primary modes of income are begging and participation in sex work (Table 3). There were no major postoperative complications registered. The most frequently observed complications were wound infection and reactionary bleeding from neourethroplasty. The scores of all the 4 domains were recorded using WHOQOL-BREF instrument pre-operatively and one year after the surgery.

Table 1: Age distribution.

Age (years)	Number	%
<20	7	11.29
20-25	29	46.77
26-30	20	32.26
31-35	3	4.84
36-40	3	4.84
>40	0	0
Mean age		21.49

Table 2: Literacy rate.

Educational status (UNESCO)	Number	%
Literate	43	69.35
Illiterate	19	30.65

The mean values are compared and presented in the (Table 4 and Figure 1). In the preoperative score, it was observed that the psychological health domain is much

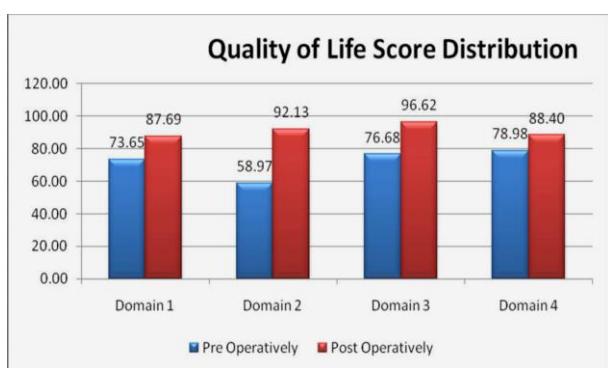
lower than the other three domains. the p-value for the quality of life score distribution is <0.0001 in first three domains (physical, psychological and social health) and 0.0019 in the fourth domain that is environmental health. our study shows significant improvement in physical, psychological and social health domains after gender reassignment surgery. Highest improvement was observed in the psychological health domain, and the score improved from 56 to 92 after the surgery.

Table 3: Employment status.

Employment status	Number	%
Sex worker	26	41.93
Begging	16	25.80
NGO	7	11
Dancer	5	8.06
Beautician	4	6.45
Others	2	3.22
Teacher	1	1.61
Pharmacist	1	1.61

Table 4: QoL distribution with statistical analysis.

Quality of Life Score Distribution	Domain 1	Domain 2	Domain 3	Domain 4
	Mean	58.97	76.68	78.98
Pre-operatively	SD	9.91	12.68	25.88
	Median	69	63	78
	Minimum	44	31	19
	Maximum	91	81	100
	P value	<0.0001	<0.0001	<0.0001
Post-operatively	Mean	87.69	92.13	96.62
	SD	12.55	9.93	8.90
	Median	88	94	98
	Minimum	50	63	50
	Maximum	98	94	100

**Figure 1: QoL score distribution.**

DISCUSSION

Gender Reassignment Surgery is often the last and the most well thought out step in the treatment process for

Gender dysphoria. A total of 62 cases were performed in two and half year period, from March 2015 to August 2017. The study included transwomen who had volunteered to undergo GRS MtF in our hospital. All the patients included in this study were examined and counseled by a team of psychiatrists. The transwomen of our study were aged between 19 and 39(median 21.49). It is very evident from the occupation and the literacy rate that they have lower quality of life than the general population.

According to the 2011 census, the literacy rate of transgender community is 46% which is very low when compared with the national average of 76%. Literacy rate in our study is 69%. Lakshmanan and Victor did an elaborate study on transgenders in Chennai using qualitative and quantitative techniques of data collection and analysis in 2010. A standardized Tamil version of the wellbeing questionnaire -12(Gold Berg 1972) was used. 75.76% of the transgenders belonged to the "average

wellbeing category" while the rest were in the "better wellbeing category". From the in-depth interviews, it was inferred that the socio-economic status of transgender was very poor and they felt inferior to others and were constantly humiliated and ill-treated by the society at large. However, support within their community was strong.¹⁵ Lakshmi Pathy S & Thenmozhi conducted a study in Chennai, Tamilnadu using WHOQOL-BREF instrument. This study also demonstrated the poor quality of life among transgenders. Also they pointed out; the QoL was not significantly correlated with the age and the educational status of transgenders.¹⁶ In all these studies, the root cause implicated for the poor quality of life is prevailing social stigma and denial of human rights. But these studies have not evaluated the effect of GRS on quality of life.

From this study, one can observe that the surgical management improved the quality of life in the first three domains of WHOQOL-BREF instrument namely physical health, psychological health and social relationship. Among these three domains, we can observe that there is a significant improvement in psychological health. Analysis of postoperative cases concluded that transsexuals who underwent such surgery had a significant satisfactory outcome than transsexuals who were denied this surgery.^{17,18} Also in our study; we noticed a significant satisfaction rate after GRS. The limitation of this study is that this is a very short term study and we followed the patients for only one year. We need a long term follow up to ascertain the benefit of the surgery concerning quality of life. The finding from a similar study conducted elsewhere shows that QoL decrease with time, although statistically non-significant.¹⁹ One possible reason for the low QoL with time is disappointment with a surgical outcome like poor functional and cosmetic results. The non-compliance of QoL in a developing country like India after the surgery may also be due to other important factors like economical sustainability of individuals and social discrimination. In our study group, all patients are satisfied with the postoperative outcome and there were no regrets.

The quality of life in India before and after the surgery has not been investigated or studied. There are no clear national-level consensus/guidelines for the management of gender dysphoria available till now and the Indian health care continues to be silent over this marginalized group. Very few centres provide gender-affirming surgeries in India, and they are not sure about the legal background of the transgender issues. Sex reassignment surgeries remain a distant dream for many members of the transgender community because of the high cost incurred at private hospitals and the lack of sensitivity at government institutions. The second apparent limitation is that we used the WHOQOL-BREF instrument to assess the QoL, which is well validated in several populations. But it is difficult to say that this

instrument is capable of capturing the Gender dysphoria issues of transgender people.

CONCLUSION

Our short term study clearly shows there is a significant improvement in the quality of life after Gender Reassignment surgery in transwomen. However, long term follow up is needed to ascertain the beneficial effect of the surgery on QoL. Hence, gender reassignment surgery has an important role in reducing the distress caused by gender dysphoria in transwomen and it can be performed safely. Multidisciplinary approach at the tertiary care level is important to reduce the complication rates. Another major finding of clinical importance is that the quality of life is poor as reported by transgender women compared to the general population.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Care for the health of transsexuals, transgender and gender non confirming people, the world professional association for transgender health. 7th version. Available at: https://www.wpath.org/media/cms/Documents/SOC%20v7/Standards%20of%20Care_V7%20Full%20Book_English.pdf. Accessed on 25July 2020.
2. BMJ Best Practice reports. Available at: <http://bestpractice.bmj.com/bestpractice/monograph/992/basics/epidemiology.html>. 2014. Accessed on 25July 2020.
3. Sawant NS. Transgender: status in India. Ann Indian Psychiatry 2017;1:59-61.
4. Radhakrishnan KS. In the supreme court of India Civil original jurisdiction Writ petition (Civil) No. 400 of 2012 National legal services authority. Judgment 2013. Available at: [http://www.prssindia.org/uploads/mediaTransgender/Transgender%20right%20case%20\(NALSA%20vs.%20UoI\).pdf](http://www.prssindia.org/uploads/mediaTransgender/Transgender%20right%20case%20(NALSA%20vs.%20UoI).pdf). Accessed on 25July 2020.
5. Valashany BT, Janghorbani M. Quality of life of men and women with gender identity disorder. Health Qual Life Outcomes. 2018; 16:167.
6. Davey A, Bouman WP, Arcelus J, Meyer C. Social support and psychological well-being in gender dysphoria: a comparison of patients with matched controls. J Sex Med. 2014;11:2976-85.
7. Kuhn A, Bodmer C, Stadlmayr W, Nuñez DG. Quality of life 15 years after sex reassignment surgery for transsexualism. Fertil Steril. 2009;92: 1685-9.
8. Newfield E, Hart S, Dibble S, Kohler L. Female-to-male transgender quality of life. Qual Life Res. 2006;15:1447-57.

9. Transgender health emergency rooms and hospitals. Available at: <https://www.national-geographic.com/news/2018/03/transgender-health-emergency-rooms-training-hospitals-science/>. Accessed on 25July 2020.
10. Subbaraj S, Srinivasan, Nivethaa. Gender reassignment surgery: male to female, a short-term analysis of post-operative outcome. *Int Surg J.* 2017; 4:3288-91.
11. McGregor IA. Fundamental techniques of plastic surgery and their surgical applications. 8th Ed. Edinburgh: Churchill Livingstone; 1989:39-63.
12. Karim RB, Hage JJ, Bouman FG, De Ruyter R, Van Kesteren PJM. Refinements of pre, intra, and post-operative care to prevent complications of vaginoplasty in male transsexuals. *Ann Plast Surg.* 1995;35:279.
13. Gupta R, Murarka A. *Indian J Plast Surg.* 2009;42 (2):226-33.
14. Study on wellbeing of trasgenders in Chennai. Available at: https://counselingchennai.com/wp-content/uploads/2019/01/abstract_corrected_a_study_on_general_wellbeing_of_male_to_female_transgenders_living_in_chennai.22205801.pdf. Accessed on 25 July 2020.
15. Harper A. WHOQOL Bref- World health Organization. Available at: https://www.who.int/mental_health/media/en/76.pdf. Accessed on 25 July 2020.
16. Lakshmiipathy S, Thenmozhi S. Quality of life: A Study of Transgenders. *International Journal of Indian Psychology.* 2019;7(2),571-5.
17. Rehman J, Lazer S, Benet AE, Schaefer LC, Melman A. The reported sex and surgery satisfactions of 28 postoperative male-to-female transsexual patients. *Archives of sexual behavior.* 1999;28: 7-89.
18. Tsoi WF. Follow-up study of transsexuals after sex-reassignment surgery. *Singapore Med J.* 1993;34: 515-7.
19. Lindqvist EK, Sigurjonsson H, Möllermark C, Rinder J, Farnebo F, Lundgren TK. Quality of life improves early after gender reassignment surgery in transgender women. *Eur J Plast Surg.* 2017;40(3): 223-6.

Cite this article as: Nivethaa, Subbaraj S, Tirrougnanassambandamourty TA. Quality of life after gender reassignment surgery in transwomen. *Int Surg J* 2020;7:2903-7.