

# Quality of Life among Transgender Individuals in Selected Districts, Kerala

## Calidad de vida entre personas transgénero en distritos seleccionados de Kerala

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### Abstract

Transgender individuals, sometimes referred to as Trans individuals or Trans people, are people whose gender identity differs from the sex assigned to them at birth. The present study aimed to assess the quality of life (QOL) of transgender individuals in selected districts of Kerala and to examine its association with selected baseline and clinical variables.

**Methods:** A descriptive study was conducted among 65 transgender individuals in selected centers in the Thrissur and Palakkad districts using purposive sampling and face-to-face interviews. Baseline and clinical variables were collected using a semi-structured questionnaire, and the WHOQOL-BREF scale was used to assess quality of life. Descriptive statistics, ANOVA, and Student's *t*-test were used for data analysis. **Results:** The mean QOL scores for the physical, psychological, social, and environmental domains were  $31.7 \pm 6.1$ ,  $37.8 \pm 9.6$ ,  $74.7 \pm 21.9$ , and  $29.1 \pm 6.1$ , respectively. The total mean QOL score was  $226.3 \pm 42.9$ . The social relationships domain had the highest score, while environmental health was the most affected domain. Based on QOL classification, 37 (56.9%) participants had an average quality of life, 19 (29.2%) had good QOL, 8 (12.4%) had poor QOL, and 1 (1.5%) had very poor QOL. Statistically significant associations were found between QOL and religion ( $p = 0.037$ ), sex reassignment surgery ( $p = 0.014$ ), and financial support ( $p = 0.005$ ). **Conclusion:** The findings highlight the need for tailored interventions and support services to address domain-specific factors influencing the quality of life of transgender individuals.

**Key words:** Quality of life, Transgender, Health care, Gender identity.

### Resumen

Las personas transgénero, a veces denominadas personas trans, son personas cuya identidad de género difiere del sexo asignado al nacer. El presente estudio tuvo como objetivo evaluar la calidad de vida (CV) de las personas transgénero en distritos seleccionados de Kerala y examinar su asociación con variables basales y clínicas seleccionadas. **Métodos.** Se realizó un estudio descriptivo entre 65 personas transgénero en centros seleccionados en los distritos de Thrissur y Palakkad utilizando un muestreo intencional y entrevistas cara a cara. Las variables basales y clínicas se recopilaron mediante un cuestionario semiestructurado, y se utilizó la escala WHOQOL-BREF para evaluar la calidad de vida. Se utilizaron estadísticas descriptivas, ANOVA y la prueba *t* de Student para el análisis de datos. **Resultados.** Las puntuaciones medias de CV para los dominios físico, psicológico, social y ambiental fueron  $31.7 \pm 6.1$ ,  $37.8 \pm 9.6$ ,  $74.7 \pm 21.9$  y  $29.1 \pm 6.1$ , respectivamente. La puntuación media acumulativa de CV fue  $226.3 \pm 42.9$ . El dominio de relaciones sociales tuvo la puntuación más alta, mientras que la salud ambiental fue el dominio más débil. Con base en la clasificación de CV, 37 (56.9%) participantes tuvieron una calidad de vida promedio, 19 (29.2%) tuvieron una buena, 8 (12.4%) la tuvieron mala CV y 1 (1.5%) tuvo muy mala CV. Se encontraron asociaciones estadísticamente significativas entre CV y religión ( $p = 0.037$ ), cirugía de reasignación de sexo ( $p = 0.014$ ) y apoyo financiero ( $p = 0.005$ ). **Conclusión.** Los hallazgos resaltan la necesidad de intervenciones personalizadas y servicios de apoyo para abordar factores específicos de cada dominio que influyen en la calidad de vida de las personas transgénero.

**Palabras clave:** Calidad de vida, Transgénero, Atención médica, Identidad de género.



## Introduction

The World Health Organization (WHO) recognizes *transgender* as a term for people whose gender identity differs from the sex assigned to them at birth, emphasizing the importance of gender-affirming care and support for this population.<sup>1</sup> Approximately 1% of the global population identifies as transgender or gender non-conforming, which corresponds to about 78 million people worldwide, based on a global population of roughly 7.8 billion.<sup>2</sup> In the United States, approximately 1.14% of the adult population—about 3 million people—identify as transgender.<sup>3</sup> According to the 2011 census, the transgender population in India is approximately 480,000.<sup>4</sup> The quality of life (QOL) of transgender individuals is shaped by a range of factors, including physical health, psychological well-being, social relationships, and access to healthcare. Transgender people frequently face significant challenges such as discrimination, stigma, and barriers to gender-affirming care, all of which can negatively affect their overall quality of life. Research indicates that transgender individuals are at higher risk for mental health conditions such as depression and anxiety, largely due to the stress associated with social marginalization and lack of acceptance.<sup>5</sup>

In India, cultural attitudes toward and acceptance of transgender people differ markedly from those in Western countries. Transgender individuals face substantial social challenges and frequently experience discrimination in employment, housing, healthcare, education, and interactions with official institutions. Many are compelled to engage in work that does not reflect their skills or education, and a significant number rely on ritual performances, begging, or sex work for survival. Transgender people in Kerala are particularly vulnerable to discrimination and marginalization. They face violence and prejudice in nearly every aspect of daily life. According to a 2014 study on transgender policy in Kerala, 58% of transgender children drop out of school before completing tenth standard due to harassment, negative gender-related treatment, and lack of access to reserved educational quotas, among other factors.<sup>6</sup>

The quality of life (QOL) of transgender individuals in Kerala is shaped by multiple factors, including access to healthcare, social support, economic stability, and societal attitudes. While some studies report poor QOL due to discrimination, stigma, and financial hardship, others describe moderate to good QOL when adequate social support and services are available. A review of the existing literature indicates that only a limited number of studies have been conducted among transgender people in Kerala. Therefore, this study was undertaken to examine the quality of life of transgender individuals in selected districts of Kerala. Specifically, the study aims to assess their quality of life and to examine its association with selected baseline and clinical variables.

## Materials and Methods

A descriptive study was conducted in the Thrissur and Palakkad districts of Kerala between January and February 2024. Ethical approval was obtained from the Institutional Ethics Committee prior to the commencement of the study, as documented in official letter number 08/EC/23/AIMS-27 dated 17/06/2023. The study population consisted of transgender individuals residing in Kerala, and the sample included 65 transgender persons aged 18–59 years from the Palakkad and Thrissur districts. The sample size was calculated using a 10% absolute precision and a 95% confidence interval, resulting in a required sample size of 65. Participants who met the inclusion criteria were selected using purposive sampling. Written informed consent was obtained from all participants. Following a brief introduction, the researcher explained the purpose of the study and obtained participants' consent prior to data collection. Data were collected from two centers under the Jai Christo Province—Mercy Home in Palakkad and Christ Bhavan in Thrissur. The participants were members of a project operated by the Jai Christo Province. Baseline and clinical variables were collected through interviews using a semi-structured questionnaire. The WHOQOL-BREF scale was used to assess the quality of life of the transgender participants.

A semi-structured questionnaire was used to assess baseline and clinical variables, including age, educational status, source of income, religion, current living status, type of residence, marital status, height, weight, BMI, history of sex-reassignment surgery, other surgical procedures, hormone replacement therapy, use of medications other than hormone therapy, presence of illness, gender dysphoria, leaving home, and financial support. The WHOQOL-BREF scale was used to assess the quality of life of transgender participants. The WHOQOL-BREF is a generic five-point scale consisting of 26 items across four domains. Permission to use the original version of the scale was obtained from the WHO Press prior to the start of the study. The four domains include physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items). Each item is rated on a five-point Likert scale, with response options scored from 1 to 5. Domain scores are calculated as the mean of the items within each domain and are scaled positively. Raw scores were transformed into standardized scores using the SPSS software package.<sup>7</sup> Descriptive statistics, including means, medians, and standard deviations, were used to summarize the data. ANOVA and Student's *t*-tests were used to assess statistical significance, and a *p*-value of < 0.05 was considered statistically significant.

## Results

Section A: Distribution of transgender people according to baseline and clinical variables.

**Table 1: Frequency and percentage distribution of transgenders, n=65**

Baseline variables	Frequency	Percentage
<b>Age in year</b>		
18- 29	34	52.3
30-39	22	33.8
40-49	4	6.2
50-59	5	7.7
<b>Educational status</b>		
Primary	7	10.8
Secondary/Higher secondary	34	52.3
Technical/Diploma courses	23	35.4

Baseline variables	Frequency	Percentage
Graduation/Post-graduation	1	1.5
<b>Source of Income</b>		
Government job	4	6.1
Private job	41	63.1
Daily wages	20	30.8
<b>Religion</b>		
Hindu	51	78.5
Christian	10	15.3
Muslim	4	6.2
<b>Living with</b>		
Transgender community	15	23
Biological family	25	38.5
Alone	25	38.5
<b>Type of residence</b>		
Own house	24	36.9
Rented house	39	60
Hostel	2	3.1
<b>Marital status</b>		
Married	7	10.8
Unmarried	52	80
Separated/Divorced	2	3
Living together	4	6.2
<b>Clinical variables</b>		
<b>Other surgeries</b>		
Yes	7	10.8
No	58	89.2
<b>Hormone Replacement Therapy</b>		
Yes	54	83.1
No	11	16.9
<b>Other medicines</b>		
Yes	9	13.8
No	56	86.2
<b>Presence of Illness</b>		
Yes	6	9.2
No	59	90.8

Clinical variables	Frequency	Percentage
<b>Leaving home</b>		
< one year	1	1.5
1- 5years	21	32.3
6 - 10years	11	17
> 10years	32	49.2
<b>Financial support</b>		
Yes	12	18.5
No	53	81.5
<b>Type of financial support</b>		
Charitable society	11	16.9
Biological family	1	1.5

In the study, the majority of transgender individuals (52.3%) were in the age group of 18–29 years and had completed secondary or higher secondary education. Most of them (63.1%) were employed in the private sector, and the predominant religion was Hinduism (78.5%). Regarding living arrangements, 38.5% lived with their biological family, while another 38.5% lived alone, with 60% residing in rented houses. The majority (80%) were unmarried, and 53.8% had a normal Body Mass Index (BMI). More than half (52.3%) had undergone Sex Reassignment Surgery (SRS), with 56% (n = 19) having top surgery, 35% (n = 12) undergoing both top surgery and vaginoplasty, and only 9% (n = 3) having vaginoplasty alone. Most participants (89.2%) had not undergone other surgical procedures, while 83.1% were receiving hormone replacement therapy (HRT). Among those receiving HRT, 32% (n = 17) were taking Prognova (estradiol valerate), 39% (n = 21) were taking both Prognova and Aldactone (spironolactone), and 29% (n = 16) were receiving testosterone injections. In addition, 86.2% were not using medications other than HRT, while 13.8% reported using medications such as thyroxine (Thyronorm), amlodipine, antiretroviral therapy, atorvastatin,

and atenolol. Most participants (90.8%) reported no chronic illness, whereas 9.2% reported conditions such as hypothyroidism, hypertension, hyperlipidemia, and HIV/AIDS. Regarding gender dysphoria, 63.1% had experienced it for more than 10 years, and 49.2% had left their home over a decade ago. Financially, 81.5% did not receive financial support, while only 16.9% benefited from charitable societies.

### Section B: Distribution of transgender individuals as per WHOQOL-BREF score

This section presents the frequency and percentage distribution of quality-of-life scores among transgender individuals based on the WHOQOL-BREF scale. The WHOQOL-BREF comprises four domains: physical health, psychological health, social relationships, and environmental health. The mean quality-of-life scores for the physical, psychological, social, and environmental domains were  $31.7 \pm 6.1$ ,  $37.8 \pm 9.6$ ,  $74.7 \pm 21.9$ , and  $29.1 \pm 6.1$ , respectively. The overall mean quality-of-life score was  $226.3 \pm 42.9$ . Among the domains, social relationships had the highest mean score, while environmental health was the most affected domain.

**Table 2: Mean and SD of quality of life as per WHOQOL-BREF score**

Quality of life	Minimum	Maximum	Mean(M)	Standard Deviation(SD)
Physical health	14.29	42.86	31.7	6.1
Psychological health	4.00	50.0	37.8	9.6
Social relationship	8.00	100	74.7	21.9
Environmental health	6.5	37.5	29.1	6.1
<b>QOL</b>	<b>75</b>	<b>294</b>	<b>226.3</b>	<b>42.9</b>

**Table 3: Level of Quality of life among Transgender Individuals, n=65**

Level of Quality of life	Frequency	Percentage
Very poor	1	1.5
Poor	8	12.4
Neither poor nor good (Average)	37	56.9
Good	19	29.2
Very good	0	0

As per the level of QOL classification, 37 (56.9%) were experiencing neither poor nor good (considered average) quality of life, while 19 (29.2%) were experiencing good quality of life, 8 (12.4%) were experiencing poor quality of life, and 1 (1.5%) was experiencing very poor quality of life.

**Table 4: Association Between Quality of Life Among Transgender Individuals and Selected Variables, n=65**

Variables	Categories	Frequency	Mean	Standard Deviation	ANOVA	
					Test value	P value
Age	18- 29	34	218.68	43.18	1.86	0.146
	30-39	22	241.41	31.95		
	40-49	4	200.50	85.22		
	50-59	5	232.80	28.12		
Underwent Sex Reassignment Surgery	Yes	34	238.68	37.87	0.252	0.014*
	No	31	212.81	44.58		
Financial support	Yes	12	196.25	54.98	0.006	0.005*
	No	53	233.15	37.01		

### Section C: Association Between Quality of Life Among Transgender Individuals and Selected Baseline and Clinical Variables

ANOVA and Student's *t*-tests were used to examine associations. Statistically significant associations were found between religion, sex reassignment surgery, and financial support and overall quality of life. No significant associations were found with age, educational status, source of income, current living status, type of residence, marital status, BMI, surgeries other than sex reassignment surgery, hormone replacement therapy, medications other than hormone replacement therapy, illness, gender dysphoria, or leaving home.

The findings of the present study provide valuable insights into the sociodemographic characteristics and quality of life (QOL) of transgender individuals. The study shows that a substantial proportion (52.3%) of participants had completed secondary or higher secondary education, which is consistent with a similar study conducted in Kerala, where 42% had a high school education.<sup>6</sup> Additionally, most participants (78.5%) were Hindu, which aligns with findings from the Kerala study reporting that 48% of transgender individuals were Hindu. Marital status findings also support previous research, with 80% of participants in the current study being unmarried, compared with 82% in the Kerala study.<sup>6</sup>

In terms of age distribution, 52.3% of transgender individuals in the present study were in the 18–29-year age group. These findings are consistent with a prospective observational cohort study in Thailand, where 51.2% of transgender individuals were aged 21–25 years.<sup>8</sup> Similarly, BMI analysis indicated that 53.8% of participants had a normal weight, comparable to the 65.9% normal BMI rate reported in the Thai study.

A significant finding of the current study is that 52.3% of transgender individuals had undergone Sex Reassignment Surgery (SRS), and 49.2% had been away from their homes for more than 10 years. These findings are broadly consistent with a study conducted in Bangalore, where 85% had undergone SRS and 98.3% had been away from home for more than a decade.<sup>9</sup> This pattern suggests that SRS is a major aspect of transgender life experiences and reflects the substantial social and familial challenges faced by transgender individuals.

The QOL analysis revealed domain-specific variations. The highest mean score was observed in the social relations domain (74.7 ± 21.9), while the lowest was in environmental health (29.1 ± 6.1). These results are consistent with a cross-sectional study in North Kerala, which reported the highest QOL scores in social relationships and the lowest in the environmental domain.<sup>10</sup> Similarly, a Brazilian study comparing QOL among transgender women and men found the lowest

scores in the environmental domain, followed by psychological and physical health, with the highest scores in social relations.<sup>11</sup> These consistent findings highlight the need for interventions that address environmental and psychological well-being in order to improve the overall quality of life of transgender individuals.

The classification of QOL in the present study indicates that 56.9% of participants had an average QOL, 29.2% had good QOL, 12.4% had poor QOL, and 1.5% had very poor QOL. These findings are comparable to an Iranian study, in which 48% reported an average QOL, 27.6% good QOL, 11% poor QOL, and 10.25% very poor QOL.<sup>12</sup> A study conducted in West Bengal also demonstrated similar trends, with 33.3% reporting average QOL, 26.4% reporting good QOL, and 29.3% reporting poor QOL.<sup>13</sup>

A statistically significant association was found between religion, SRS, financial support and overall QOL, which is consistent with findings from a prospective study in Puducherry that reported notable improvements in psychological, social, and physical health domains following SRS.<sup>14</sup> Notably, no significant association was observed between education, source of income, and total QOL, in line with the findings from the North Kerala study.<sup>10</sup>

Overall, the results of this study are consistent with findings from both national and international research, reinforcing the importance of targeted interventions aimed at improving environmental and psychological well-being. Future research should focus on longitudinal assessments to better understand the long-term effects of SRS, financial support, and social inclusion on the overall quality of life of transgender individuals.

## Conclusion

The study of transgender individuals in the Palakkad and Thrissur districts of Kerala reveals a nuanced picture of their quality of life (QOL). With an overall mean QOL score of  $226.3 \pm 42.9$ , more than half of the participants (56.9%) were found to have an average quality of life. Good quality of life was reported by 29.2%, while 12.4% reported poor QOL and a small proportion (1.5%) reported very poor QOL. Key factors influencing

QOL included financial support, sex reassignment surgery (SRS), and religion. The highest satisfaction was observed in the social relationships domain, indicating relatively strong social connections, whereas the lowest scores were found in environmental health, highlighting this as a major area of concern. These findings underscore the need for tailored interventions and support services to address domain-specific needs. While strengthening social support remains important, there is also an urgent need to improve physical health and environmental conditions to enhance overall well-being. Although some positive aspects of quality of life were observed among transgender individuals in Thrissur and Palakkad, significant challenges remain, particularly in the environmental domain. Addressing these challenges through targeted support and policy-level interventions could substantially improve their overall quality of life.

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