

Original Research Article

A cross-sectional study on the quality of life of economically productive age group rural women at Keelara CHC, Mandya

Bagyalaxmi Hirehanamantagoudar^{1*}, Divya Arulprakasam², Anamika Goswami³

¹Department of Community Medicine, S. R. Patil Medical College, Hospital and Research Centre, Badagandi Karnataka, India

²Department of Community Medicine, St. Peter's Medical College, Hospital and Research Institute, Hosur, Tamil Nadu, India

³Department of Community Medicine, Tripura Medical College and Dr BRAM Teaching Hospital, Agartala, Tripura, India

Received: 26 May 2025

Revised: 07 August 2025

Accepted: 11 August 2025

*Correspondence:

Dr. Bagyalaxmi Hirehanamantagoudar,
E-mail: bhagyaumashree123@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: Household upkeep, food security, and rural lives depend heavily on economically active women in rural areas. However, they face major environmental and socioeconomic obstacles that have a significant impact on their standard of living.

Methods: A cross-sectional study (CSS) was conducted within a community, involving 1,250 rural women aged 15 to 65 years who attended the Keelara Community Health Centre (CHC) in Mandya. Data were collected utilizing the WHOQOL-BREF questionnaire, which encompasses physical, psychological, social, and environmental domains. Socio-demographic and economic variables were recorded as well.

Results: Among participants, 63.4% were aged 19-44 years, and 95.9% were Hindu. Educational attainment varied, with 24.9% illiterate and 32.0% completing secondary education. Most lived in nuclear families (54.2%) and belonged to lower socioeconomic classes (75.8% in Class IV). The mean overall QOL score was 103.40±11.92. Statistically noteworthy associations were established between QoL and education, marital status, family type, socioeconomic status, and religion ($p<0.05$); age and occupation were not significant.

Conclusions: A notable proportion of women inside rural areas indicate a less than satisfactory QoL, which is profoundly influenced by variables including educational attainment, socioeconomic conditions, and familial support systems. Targeted interventions that focus on these determinants are crucial for enhancing the well-being and societal contributions of women in rural areas.

Keywords: CHC, Healthcare, Quality of life, WHO, WHOQOL-BREF

INTRODUCTION

The World Health Organization (WHO) defines health as “systemic differences in health conditions among various population groups”.¹ As medical along with public health advances have provided cures, improved treatment of prevailing diseases, alongside delayed mortality, it has become logical for those measuring health outcomes to

gauge population health not only in terms of saving lives, along with around enhancing QOL.

QOL, a multidimensional concept, has evolved significantly in terms of its indicators, analytical methods, and the availability of comprehensive datasets. Initially, QOL assessments were most commonly applied in the context of malignancies.² However, their use has now

become widespread in the evaluation of chronic conditions such as diabetes, hypertension, tuberculosis, COPD, and HIV.³ QOL has also been assessed amongst adolescent's health care setting and within various occupational groups.

Among these, the economically productive age viz., between 15 and 65 years holds a significant importance. The health status and QOL of this group plays a crucial role in depicting development of nation. A higher QOL within this segment contributes directly to economic growth and societal well-being. In this context, rural women deserve special attention, as they are vital in upholding their households along with communities by ensuring food security, and generating income, and enhancing rural livelihoods. In pursuit of a better life, these women make relentless efforts every day to improve their living conditions.⁴

Recognizing the vital role of women, especially inside rural regions, the concept of QOL has emerged as a key measure of their overall well-being. Rural women in developing countries often face significant socio-economic and environmental challenges that negatively affect their QOL. Enhancing their well-being is not only a matter of gender equity but also essential for sustainable development. Despite their substantial contributions, their health and welfare are frequently neglected. This study was undertaken to gauge the QOL of rural women aged 15 to 65 years attending Keelara CHC in Mandya. The findings aim to provide insights that can help direct interventions along with policies aimed at enhancing the welfare of this critical but vulnerable group of people.

METHODS

This community-grounded CSS was done among rural women in the economically productive age group (15–60 years) residing inside field practice area of Keelara CHC, which is a part of the department of community medicine at Mandya Institute of Medical Sciences, in Mandya. The data was gathered over a twelve-month period, from January to December 2020. The total population covered by Keelara CHC is 10585 and out of its female population is 5121.

Sampling and sample size

The study used a simple random sampling practice to select participants. The sample size was configured per the reported ubiquity of poor quality of life, which was 58.7% in a previous study by Rajasi et al.⁵ The calculation yielded a sample size of 1129, which was rounded to 1250 to ensure inclusion of all eligible subjects from the selected villages.

Ethical consideration

This work began post procurement of approval from institutional scientific committee (ISC) and institutional

ethics committee (IEC) of MIMS, in Mandya. IEC vide letter no.: MIMS/IEC/2019/324.

Inclusion criteria

This work's inclusion criteria were women aged 15-65 years, including those above 18 years who provided informed consent and girls aged 15-18 years who gave informed assent with parental/guardian consent. Only permanent residents of the village, residing for over one year, were included.

Exclusion criteria

Women with known psychiatric disorders or women who declined to give informed consent or were unavailable after three consecutive follow-up visits were excluded from participation.

Data collection

A simple random sampling method using a lottery system was applied to select a village from six villages under the Keelara CHC. In the selected village, a list of women aged 18-65 was compiled with the help of local ASHA workers and Anganwadi workers. Informed consent was gotten from participants, and they were then administered a pre-designed along with pre-tested questionnaire in Kannada to acquire socio-demographic data and assess factors affecting QOL. The WHOQOL-BREF tool was utilized to gauge QOL, including physical, and psychological, and social, along with environmental domains. Blood pressure, blood glucose, and BMI were also measured.

Study tools and instruments

The WHOQOL-BREF or WHOQOL-100 consists of 26 items divided into four domains. The tool generates a QOL profile with four domain scores. Additionally, two separate questions assess the overall QOL and health perception. The domain scores are configured by averaging the responses inside each domain, then multiplying by 4 to align with the WHOQOL-100. These scores can be transformed into either a 0-100 scale or a 4-20 scale for further analysis.

Data analysis

The acquired data were systematically entered right into Microsoft Excel for organization and later analysed using IBM SPSS Version 20. Descriptive statistics, counting percentages, and mean, along with standard deviation, were employed to summarize the socio-demographic details and the QOL scores. To analyse the data inferentially, various statistical tests were applied such as Mann-Whitney U test, along with Kruskal-Wallis test, and Friedman analysis of variance was utilized. Statistical significance was gauged at a 95% confidence level, with a p value under 0.05 considered statistically noteworthy.

RESULTS

Socio-demographic profile of the study subjects

1250 women participated in the study. Among them, 793 (63.44%) belonged to the 19-44 years age group, 418 (33.44%) were aged 45 years and above, and 3.12% were inside the 15-18 years age group. The majority of participants, 95.90%, identified as Hindu, while 4.10% belonged to Muslim or other religions. In terms of educational status, 32.00% had completed secondary education, 24.90% were illiterate, 19.50% had completed primary education, 16.00% had completed diploma, and 7.60% had a degree. Marital status showed that 78.10% were married, 10.10% unmarried, 11.20% widowed, and 0.60% were separated. Family structure revealed that

54.20% belonged to nuclear families, 35.70% to joint families, and 10.10% to three-generation families. Socioeconomic data indicated that 75.80% were in class IV, 20.40% in class III, 1.50% in class V, 17 (1.40%) in class II, and 0.90% in class I SES.

The sociodemographic characteristics of this work's population are given in Table 1.

Factors affecting quality of life (QOL) and domain-wise distribution

The overall mean QOL score among the study participants was 103.40±11.92. The distribution of QOL scores is summarized in Table 2, which presents the grading of study participants based on their QOL scores.

Table 1: Study subjects' distribution per their socio-demographic profile (n=1250).

Variables	Frequency	Percentage
Age group (in years)		
15-18	39	3.12
19-44	793	63.44
≥45	418	33.44
Religion		
Hindu	1199	95.90
Muslim and others	51	4.10
Education		
Illiterate	311	24.90
Primary	244	19.50
Secondary	400	32.00
PUC or Diploma	200	16.00
Degree	95	7.60
Marital status		
Married	976	78.10
Unmarried	126	10.10
Separated	8	0.60
Widowed	140	11.20
Occupation		
Unskilled	217	17.40
Semiskilled	18	1.40
Skilled	46	3.70
Professional	16	1.30
Student	103	8.20
Homemaker	850	68.00
Type of family		
Nuclear	678	54.20
Three generation	126	10.10
Joint	446	35.70
Socioeconomic status (Modified BG Prasad classification)		
Class I	11	0.90
Class II	17	1.40
Class III	255	20.40
Class IV	948	75.80
Class V	19	1.50

Table 2: Grading of study participants according to QOL.

Grade	Percentile	QOL score	Frequency (%)
Very good	>75 th	>112	302 (24.16)
Moderately good	75 th -50 th	107-111	302 (24.16)
Moderately poor	50 th -25 th	99-106	364 (29.12)
Very poor	<25 th	<99	282 (22.56)
Total	Total		1250 (100.00)

Table 3. Study participants' distribution QOL with respect to their socio demographic profile.

Factor	Frequency (%)	QOL mean rank score	P value
Age group (in years)			
15-18	39 (3.12)	735.49	0.134
19-44	793 (63.44)	625.93	
≥45	418 (33.44)	614.42	
Religion*			
Hindu	1199 (95.90)	629.75	0.044
Muslim and others	51 (4.10)	525.67	
Education			
Illiterate	311 (24.90)	517.21	<0.001
Primary	244 (19.50)	620.30	
Secondary	400 (32.00)	648.10	
Diploma	200 (16.00)	725.36	
Degree	95 (7.60)	687.99	
Marital status			
Married	976 (78.10)	674.08	<0.001
Unmarried	126 (10.10)	583.40	
Separated	8 (0.60)	512.13	
Widowed	140 (11.20)	331.20	
Occupation			
Unskilled	217 (17.40)	566.86	0.092
Semiskilled	18 (1.40)	702.42	
Skilled	46 (3.70)	646.65	
Professional	16 (1.30)	593.00	
Student	103 (8.20)	593.74	
Homemaker	850 (68.00)	642.16	
Type of family			
Nuclear	678 (54.20)	604.11	0.017
Three generation	126 (10.10)	699.07	
Joint	446 (35.70)	637.23	
Socioeconomic status (modified BG Prasad classification)			
Class I	11 (0.90)	773.91	<0.001
Class II	17 (1.40)	789.97	
Class III	255 (20.40)	706.09	
Class IV	948 (75.80)	602.55	
Class V	19 (1.50)	455.68	

Test of significance used- Kruskal-Wallis Test and *Mann-Whitney U test.

Factors affecting the QOL

The study examined several socio-demographic factors influencing the QOL of the participants. Age did not show a statistically noteworthy variation in QOL scores across the different age groups ($p=0.134$), indicating that

age was not a determining factor for the women's QOL in this study. However, a statistically noteworthy variance was noticed in the QOL of women belonging to different religions ($p=0.044$), indicating that religion could be contributing to the quality of life. Education was also a clear determiner with a statistically noteworthy variance

present in the QOL among different educational levels ($p<0.001$). As education level improved, QOL scores for the women were also improved, and thus higher educational levels were found to be correlated with improved well-being.

Furthermore, marital status had a significant impact on QOL ($p<0.001$), with married women reporting better QOL than their unmarried counterparts. While, occupation did not show a significant influence on QOL ($p=0.092$), suggesting that the type of employment or lack thereof did not substantially affect their overall QOL. This work also revealed that family type significantly influenced QOL ($p=0.017$), with women from three-generation families reporting better QOL compared to those from nuclear or joint families ($p<0.001$).

Lastly, socioeconomic status (SES) was found to have a significant impact on QOL, women with higher SES classes (I, II, and III) showing significantly better QOL compared to those in lower SES classes IV and V ($p<0.001$). These findings, as presented in Table 3, show the complex interaction of various factors, namely education, and marital status, and family type, along with SES, in determining the general QOL of women inside this work.

Domain-wise distribution of QOL

As given in Table 4, domain-wise assessment of QOL using the Friedman test showed statistically significant differences across the four domains ($p<0.001$). This indicates that participants perceived better QOL in the physical domain, while the social domain reflected the lowest perceived QOL.

Table 4: Distribution of different domains of QOL according to their mean rank score.

Domain	Mean rank score	P value
Physical domain	3.35	<0.001
Psychological domain	2.83	
Social domain	1.66	
Environment domain	2.17	

Test of significance applied- Friedman test.

DISCUSSION

The majority of participants (63.44%) were aged 19-44 years, similar to Vyavaharkar et al findings (67.80%) among rural women.⁶ Most women (95.90%) were Hindu, comparable to 96.40% in Ahdhi et al study from Puducherry.⁷ Regarding education, 32.00% had secondary education, whereas Ahdhi et al reported 71.20%.⁷ Housewives constituted 68.00% of the sample, aligning with Devi et al 92.00% in Sikkim.⁸ Nuclear families were most common (54.20%), consistent with Devi's study.⁸ Notably, 97.70% belonged to lower socioeconomic classes, supporting trends reported by Ahdhi et al (34.40%) and Karmakar (93.50%).^{7,9}

In a Didarlool et al study among diabetic patients in Iran, the total QOL mean score was 58.02 ± 17.09 , whereas our study found a mean score of 103.40 ± 11.92 .¹⁰ This discrepancy may be due to the different patient population, as Didarlool et al focused on diabetes mellitus patients.¹⁰

Our work found no noteworthy association across age and QOL, unlike Vyavaharkar et al.⁶ Literacy positively impacted QOL, as observed by Didarlool et al.¹⁰ Marital status was positively associated with QOL, consistent with Didarlool et al and Lagadec et al.^{10,11} Women from higher socioeconomic backgrounds reported better QOL, supporting findings by Gholami et al.¹² Women satisfied with various aspects of their life, such as family relationships and healthcare access, had better QOL, as seen in our study and studies by Dongre et al.¹³ Postnatal women had better QOL, similar to findings by Ahdhi et al.⁷ Women with co-morbidities had lower QOL, as observed by Didarlool et al.¹⁰

This study was cross-sectional in design and thus cannot establish causal relationships between determinants and quality of life among rural women. As data was collected from a single CHC, the conclusions may not be generalizable to all rural women in other regions. Self-reported responses on the WHOQOL-BREF may be affected by recall bias or social desirability bias. Additionally, some potential confounders, such as specific health conditions or cultural practices, were not thoroughly explored.

CONCLUSION

This CSS evaluated the QOL of 1,250 rural women aged 15-65 years, revealing that nearly half experienced moderately poor or very poor QOL. The overall mean QOL score was 103.40 ± 11.92 . Significant correlations were established between QOL and religion, education, marital status, family type, and socioeconomic status. Better-educated women with higher economic status and supportive families had better QOL, but occupation and age did not play a role. To improve the QOL of rural women, interventions should particularly target education, economic empowerment, utilization of health services, and decision-making capacity. Addressing these determinants of QOL will result in improved well-being and greater productive contribution of women to their families and society.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee vide letter no.: MIMS/IEC/2019/324

REFERENCES

- Verma R. Health is a state of complete physical, mental, and social well-being and not merely. In:

- Inequality around the World: Understanding the Rich-Poor Divide from America to Zimbabwe. 1st edn. New York, NY: Bloomsbury Academic; 2025;2:213.
2. Montazeri A, Hole DJ, Milroy R, McEwen J, Gillis CR. Quality of life in lung cancer patients: does socioeconomic status matter? *Health Qual Life Outcomes*. 2003;1:19.
 3. Siboni FS, Alimoradi Z, Atashi V, Alipour M, Khatooni M. Quality of life in different chronic diseases and its related factors. *Int J Prev Med*. 2019;10(1):65.
 4. Dudi J, Malik P, Verma A, Priyanka, Reenu. Comparative study of women's quality of life in rural and urban areas. *Pharma Innov J*. 2023;12(5):2476-82.
 5. Rajasi RS, Mathew T, Nujum ZT, Anish TS, Ramachandran R, Lawrence T. Quality of life and sociodemographic factors associated with poor quality of life in elderly women in Thiruvananthapuram, Kerala. *Indian J Public Health*. 2016;60(3):210-5.
 6. Vyavaharkar M, Moneyham L, Murdaugh C, Tavakoli A. Factors associated with quality of life among rural women with HIV disease. *AIDS Behav*. 2012;16(2):295-303.
 7. Ahdhi GA, Subramanian R, Saya KG, Yamuna TV. Prevalence of low back pain and its relation to quality of life and disability among women in rural area of Puducherry, India. *Indian J Pain*. 2016;30(2):111-5.
 8. Devi B, Karki P, Sharma N, Niroula M, Pradhan S. Quality of life of postmenopausal women residing in rural and urban areas of Sikkim, India. *Int J Reprod Contracept Obstet Gynecol*. 2018;7(12):5125-33.
 9. Karmakar N, Datta N, Nag K, Tripura K. Quality of life among geriatric population: a cross-sectional study in a rural area of Sepahijala district, Tripura. *Indian J Public Health*. 2018;62(2):95-9.
 10. Didarloo A, Alizadeh M. Health-related quality of life and its determinants among women with diabetes mellitus: a cross-sectional analysis. *Nurs Midwife Stud*. 2016;5(1):e28937.
 11. Gholami A, Azini M, Borji A, Shirazi A, Sharafi Z, Zarei E. Quality of life in patients with type 2 diabetes: application of WHOQOL-BREF scale. *Shiraz E Med J*. 2013;14(3):162-71.
 12. Dongre AR, Deshmukh PR. Social determinants of quality of elderly life in a rural setting of India. *Indian J Palliat Care*. 2012;18(3):181-9.
 13. Lagadec N, Steinecker M, Kapassi A, Magnier AM, Chastang J, Robert S, et al. Factors influencing the quality of life of pregnant women: a systematic review. *BMC Pregnancy Childbirth*. 2018;18:455.

Cite this article as: Hirehanamantagoudar B, Arulprakasam D, Goswami A. A cross-sectional study on the quality of life of economically productive age group rural women at Keelara CHC, Mandya. *Int J Community Med Public Health* 2025;12:4475-80.