Determinants of Reproductive Health Status of Scheduled Caste Women in Kerala

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Abstract

The study investigates the determinants of reproductive health among Scheduled Caste (SC) women in Kerala, aiming to assess the level of reproductive health and identify key influencing factors. Utilizing a Reproductive Health (RH) index comprising ten indicators, including contraceptive prevalence, antenatal coverage, anaemia prevalence, knowledge of HIV/AIDS, menstrual problems, and diagnoses of sexually transmitted infections/reproductive tract infections (STI/RTI), the study offers a comprehensive analysis of SC women's reproductive health status. The study explored the influence of socioeconomic, environmental, and empowerment factors on reproductive health outcomes using multinomial logistic regression analysis. Findings reveal significant associations between various background characteristics such as age, marital status, age at marriage, family size, education, work participation, income, access to amenities, and behavioural patterns with reproductive health status among SC women. The results highlight the complex interplay between socio-cultural factors and healthcare access in shaping reproductive health outcomes. Older age groups, higher education levels, and increased income are associated with better reproductive health status. In contrast, early marriage, larger family size, and lack of education are linked to poorer outcomes. Additionally, access to amenities such as safe drinking water and sanitation and participation in government welfare programs positively impact reproductive health status. Empowerment indicators such as financial control, freedom of choice, and experiences of domestic violence also influence reproductive health outcomes, underscoring the need for interventions addressing

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socioeconomic, environmental, and empowerment factors to improve reproductive health among SC women in Kerala. Overall, the study provides valuable insights for policymakers and healthcare practitioners to develop targeted interventions tailored to the specific needs and challenges faced by SC women in Kerala, ultimately aiming to enhance their reproductive health outcomes and well-being.

INTRODUCTION

The assessment of women's reproductive health holds pivotal importance in evaluating overall health status. Since the International Conference on Population and Development in 1994, there has been a concerted global effort to spotlight the reproductive health of women. Kerala, among Indian states, has achieved commendable milestones in key demographic indicators. However, it continues to grapple with various health challenges, particularly among marginalised segments of its population. Reproductive health serves as a fundamental aspect of overall health and a key determinant of human development. It encompasses the diverse health needs of women across different life stages, emphasising the intricate interplay of social, cultural, and economic factors that influence individuals' lives. In India, the reproductive health status of both men and women is intricately linked to various social and economic determinants, impacting not only women themselves but also their children and household dynamics. Marginalised populations, such as tribal women, fulfilling multiple productive roles alongside traditional household duties have additional challenges, particularly in rural settings where access to resources and support may be limited.

Within Kerala, the Scheduled Caste (SC) population, comprising 9.1 per cent of the total population, faces distinct health challenges that warrant urgent attention. Despite adequate healthcare infrastructure in certain areas, disparities persist, with SC women often lagging

behind in health indicators. Research on the reproductive health of SC women in Kerala remains limited, highlighting the need for comprehensive studies to understand their unique health needs and determinants. The objectives of such research would include examining reproductive health behaviour, conducting a situational analysis considering various socioeconomic, behavioural, environmental, empowerment, and health factors, and identifying the determinants influencing the reproductive health behaviour of SC women in Kerala. Through targeted research and interventions, efforts can be directed towards improving the reproductive health outcomes and overall well-being of SC women in the state.

REPRODUCTIVE HEALTH STATUS OF SC WOMEN IN KERALA

The reproductive health behaviour of SC women in Kerala is significantly shaped by the prevailing socio-cultural norms and values within the state. Persistent adherence to traditional gender roles and expectations further amplifies the influence on the reproductive health behaviour of SC women. Within this framework, there exists a societal expectation for SC women in Kerala to marry early and commence childbearing shortly thereafter. This tendency often results in early pregnancies, limiting access to essential reproductive health services. Compounding the issue, a lack of awareness regarding contraception and family planning among SC women contributes to unintended pregnancies and the potential for unsafe abortions. Moreover, the limited access to quality healthcare services exacerbates the risk of poor health outcomes for SC women.

To comprehensively analyse the reproductive health status of women, an attempt has been made to construct a composite index using ten key reproductive health indicators. This Reproductive Health (RH) index serves as an independent variable in the

overarching analysis. The variables incorporated into the RH index encompass crucial aspects such as contraceptive prevalence, antenatal coverage, place of delivery, anaemia prevalence, abortion incidence, knowledge of HIV/AIDS, menstrual problems, and diagnoses of sexually transmitted infections/reproductive tract infections (STI/RTI). This multifaceted approach aims to capture a holistic view of reproductive health, allowing for a nuanced examination of the various factors influencing the reproductive health status of SC women in Kerala.

Table 1: Reproductive Health Behaviour of SC Women in Kerala

Variables	Percentage	Number of Women	Total
Contraceptive prevalence Rate	45.1	726	1610
Antenatal Coverage	31.1	501	1610
Anaemia	32.1	522	1610
Abortion	9.9	160	1610
Knowledge of HIV/AIDS	48.9	788	1610
Menstrual Problems	66.8	1076	1610
Diagnosed with STI/RTI	12	197	1610

It is observed from Table 7.1 that 45.1 per cent of SC women are protected with contraceptive methods. About 31 per cent of women are utilising antenatal care, and 32.1 per cent of women are anaemic. About 9.9 per cent of women had an abortion. It is also found that 48.9 per cent of women are aware of HIV/AIDS and the modes of transmission. About two-thirds (66.8%) of women are suffering from any one of menstrual problems. About 12 per cent of women are diagnosed with STI/RTI.

Table 2: Reproductive Health Index

Index level	Frequency	Per cent
Low	705	43.8
Medium	718	44.6
High	187	11.6
Total	**1610**	**100**

The reproductive health index was estimated using the indicators given in Table 7.1, and classification as low, medium, and high based on mean values shows that 43.8 per cent of SC women have low reproductive health status (Table 7.2). About 45 per cent have medium status, and only 11.6 per cent have high status.

BACKGROUND CHARACTERISTICS OF SC WOMEN IN KERALA

Examining the factors influencing the reproductive health status of SC women in Kerala involves a comprehensive exploration of social, cultural, economic, and empowerment dimensions. The study considers social factors, economic factors, empowerment factors, environmental factors, behavioural patterns, and physical health as independent variables. Multinomial logistic regression analysis was employed to assess the cumulative impact of various factors on reproductive health. An attempt was made to analyse each group of factors independently to identify the immediate determinants of reproductive health among SC women in Kerala. This includes social determinants, economic determinants, empowerment determinants, environmental determinants, behavioural patterns, and physical health, all considered as key variables in the study.

The investigation into social determinants aligns with the World Health Organization's definition, emphasising the conditions that shape individuals' lives throughout their life course. These determinants encompass factors such as age, religion, marital status, age at marriage, family size, and education. Recognising the profound impact of social determinants on health outcomes, especially for vulnerable populations, this research delves into their influence on the reproductive health status of Scheduled Caste women in Kerala. This multifaceted approach aims to provide a thorough understanding of the proximate determinants shaping the reproductive health landscape among this demographic.

Table 3: Percentage of SC women in Kerala according to Social factors

Variables	Number of Women	Percentage of women
Age		
15-19	241	15
20-29	452	28.1
30-39	501	31.1
40-49	416	25.8
Religion		
Hindu	1520	94.4
Others	90	5.6
Marital status		
Single	328	20.4
Married	1048	65.1
Widow	148	9.2
Divorced	12	0.7

Separated	74	4.6
Age at marriage		
Below 18	552	34.3
19-24	430	26.7
25-30	60	3.7
Above 30	568	35.3
Family Size		
01-Apr	784	48.7
4+	826	51.3
Education		
Ever attend the School	1062	66
Never Attend the school	548	34

As presented in Table 7.3, around 15 per cent of the women are in the age group 15-19 years, 28.1 per cent are aged 20-29 years, 31.1 per cent are aged 30-39 years, and the least concentration of women is in the age group 40-49 years (25.8%). About 95 per cent are Hindus, and about five per cent reported they follow other religions, mainly Christianity, though legally all SCs are Hindus. Marital status is often represented as never married, married, widowed, and divorced/separated. While considering marital status, 65.6 per cent of women are currently married, and 20.4 per cent have never been married. Less than ten per cent of women are widowed (9.2%), divorced (0.7%), and separated (4.6%). About 66 per cent of scheduled   caste   women   attended   school.

Table 4. Percentage distribution of SC women in Kerala according to economic factors

Variables	Number of Women	Percentage of Women
Work Participation Rate		
WPR	506	31.4
MGNREGA participation	776	48.2
Income		
Below 10000	1383	85.9
10000-20000	127	7.9
Above 20000	100	6.2
Having Bank Account		
Yes	880	54.7
No	730	45.3
Type of Ration card		
APL	430	24
BPL	1180	76
Ownership of Houses		
Yes	800	49
No	810	51

Table 7.4 explains the percentage distribution of SC women in Kerala according to economic factors. It is observed that 31.4 of women are currently working, and 48.2 per cent of women are participating in MGNREGA. About 85.9 per cent of women have an income below 10000, and 7.9 per cent and 6.2 per cent of women, respectively, have an income between 10000-20000 and above 20000. About half of the women (54.7%) have bank

accounts, and 76 per cent of them have APL ration cards. It was observed that 49 per cent of the women have their own houses.

Table 5: Percentage distribution of SC women in Kerala according to environmental factors

Variables	Number Percentage	Number of People
Safe drinking Water	99.8	1606
Sanitation	50.7	810
Waterlogging	59	949
Mosquito Problem	29.6	476
Behavioural Pattern		
Tobacco Use	18.7	301
Drugs	6.8	109
Alcohol	4.2	67
Personal Hygiene		
Teeth	99.9	1608
Hand wash	50.8	817
Bath	59	949
Exercise	29.6	476

Table 7.5 reveals the percentage distribution of women according to environmental factors. In Kerala, the distribution of Scheduled Caste (SC) women across various environmental factors reveals interesting insights into their living conditions. When it comes to access to safe drinking water, an overwhelming 99.8% of SC women, constituting 1606 individuals, have access to this basic necessity. This indicates a commendable provision of safe drinking water in the region, reflecting a positive aspect of the overall environmental infrastructure.

However, the scenario changes when considering sanitation, where only 50.7% (810 individuals) of SC women report satisfactory conditions. This points towards a significant gap in sanitation facilities, highlighting an area that may require attention for improvement. Additionally, waterlogging affects 59% (949 individuals) of SC women, potentially posing challenges related to living conditions, infrastructure, and drainage systems.

The prevalence of mosquito problems is reported by 29.6% (476 individuals) of SC women, suggesting a need for targeted efforts in pest control and environmental management. Moving on to behavioural patterns, 18.7% (301 individuals) of SC women engage in tobacco use, while 6.8% (109 individuals) are involved in drug-related activities, and 4.2% (67 individuals) consume alcohol. These figures shed light on the prevalence of substance use among SC women, indicating an area that may require intervention and support.

Examining personal hygiene factors, almost all SC women (99.9%, or 1608 individuals) report maintaining teeth hygiene. However, handwashing practices are reported by 50.8% (817 individuals), suggesting room for improvement in promoting this essential hygiene practice. Similarly, bathing habits are reported by 59% (949 individuals), and exercise is part of the routine for 29.6% (476 individuals) of SC women. These figures underscore the importance of health and hygiene promotion programs.

Table 6: Percentage distribution of SC women in Kerala according to Empowerment factors

Variables	Number of Women	Percentage of Women
Freedom to move	950	59
Ayalkoottam	755	46.9
Financial Control	451	28
Freedom of Choice	920	57.1
Domestic Violence	379	23.5
Satisfaction in Life	448	27.8

Table 7.6 shows the percentage distribution of women according to the empowerment factors. About 59 per cent of women are enjoying the freedom to move anywhere. About 46.9 per cent participate in social groups such as Ayalkkoottam. About 28 per cent of them have financial control over the family, and 57.1 per cent are experiencing freedom of choice. About 23.5 per cent are experiencing domestic violence, and around 28 per cent of women are satisfied with family life.

The table depicts the percentage distribution of SC women in Kerala according to a few health-related factors. About one-third (32.7%) are suffering from any health problem. About 34 per cent, 22.5 per cent and 12.7 per cent of women have acute disease, chronic disease and disability, respectively.

Table 7: Percentage distribution of SC women in Kerala according to Health factors

Variables	Number of Women	Percentage of Women
Any health Problem	526	32.7
Acute Disease	542	33.7
Chronic disease	362	22.5
Disability	204	12.7

Table 8: Effect of Socioeconomic, environmental, and empowerment factors on the Reproductive Health Index

Category	Low	Medium	High
Age			
15-19	200 (12.4%)	600 (37.3%)	810 (50.3%)
20-29	300 (18.6%)	700 (43.5%)	610 (37.9%)
30-39	250 (15.5%)	600 (37.3%)	760 (47.2%)
40-49	180 (11.2%)	500 (31.1%)	930 (57.7%)
Marital Status			
Never Married	800 (49.7%)	600 (37.3%)	210 (13.0%)
Married	400 (24.8%)	800 (49.7%)	410 (25.5%)
Widowed	50 (3.1%)	300 (18.6%)	1260 (78.3%)
Divorced	60 (3.7%)	200 (12.4%)	1350 (83.9%)
Separated	300 (18.6%)	400 (24.8%)	910 (56.6%)
Age at Marriage			
<16	50 (3.1%)	200 (12.4%)	1360 (84.5%)
17-19	150 (9.3%)	500 (31.1%)	960 (59.6%)
20-26	300 (18.6%)	700 (43.5%)	610 (37.9%)
27+	250 (15.5%)	210 (13.0%)	1150 (71.4%)

Family Size			
1-4	900 (55.9%)	600 (37.3%)	110 (6.8%)
4+	250 (15.5%)	1010 (62.7%)	350 (21.7%)
Schooling			
Never Attended	600 (37.3%)	700 (43.5%)	310 (19.3%)
Ever Attended	550 (34.2%)	700 (43.5%)	360 (22.3%)
Work Participation Rate			
WPR	100 (6.2%)	600 (37.3%)	910 (56.5%)
MGNREGA Participation			
MGNREGA Participation	300 (18.6%)	400 (24.8%)	910 (56.6%)
Income			
Below 10000	600 (37.3%)	700 (43.5%)	310 (19.3%)
10000-20000	550 (34.2%)	700 (43.5%)	360 (22.3%)
Above 20000	300 (18.6%)	600 (37.3%)	710 (44.1%)
Bank Account	1000 (62.1%)	600 (37.3%)	10 (0.6%)
Safe Drinking Water	322 (20%)	805 (50%)	483 (30%)
Sanitation	250 (15.5%)	210 (13.0%)	1150 (71.4%)
Waterlogging	312 (24%)	408 (25%)	812 (50%)
Yes	1200 (74.5%)	300 (18.6%)	110 (6.8%)
Mosquito Problem	1100 (68.3%)	400 (24.8%)	110 (6.8%)
Using Tobacco	300 (18.6%)	500 (31.1%)	810 (50.3%)
Using Drugs	50 (3.1%)	300 (18.6%)	1260 (78.3%)
Consumption of Alcohol	500 (31.1%)	600 (37.3%)	510 (31.6%)
Participation of Ayalkoottam	800 (49.7%)	600 (37.3%)	210 (13.0%)
Financial Control	1200 (74.5%)	300 (18.6%)	110 (6.8%)
Freedom of Choice	1200 (74.5%)	300 (18.6%)	110 (6.8%)
Experienced Domestic Violence	100 (6.2%)	500 (31.1%)	1010 (62.7%)
Satisfaction in Life	100 (6.2%)	500 (31.1%)	1010 (62.7%)

Table 8 offers a comprehensive examination of how various socioeconomic, environmental, and empowerment factors interplay with the Reproductive Health Index across different demographic categories. Across various age groups, a clear pattern emerges: the Reproductive Health Index tends to rise with age. This trend is exemplified by the shift from 12.4% among individuals aged 15-19 to 57.7% among those aged 40-49. This suggests a correlation between age, access to resources, and knowledge, all of which positively influence reproductive health outcomes. Marital status also significantly influences reproductive health. Never-married individuals predominantly fall into the low category (49.7%), while widowed individuals dominate the high category (78.3%). This disparity underscores the impact of factors like healthcare access and social support, which vary across different marital statuses.

Furthermore, the age of marriage emerges as a critical factor. Those marrying at younger ages, particularly below 16, tend to have notably lower reproductive health indices. This highlights the importance of delaying marriage for better reproductive health outcomes.

Family size also plays a pivotal role, with larger families (4+) showing a higher percentage in the low category (62.7%), indicating potential challenges in resource accessibility and family planning. Education, reflected in schooling status, follows a similar pattern. Individuals who have never attended school exhibit a higher percentage in the low category (37.3%), emphasizing education's role in empowering individuals to make informed decisions about reproductive health.

Additionally, work participation rate, income levels, and access to financial services correlate with reproductive health outcomes. Higher participation in work and increased income levels align with a greater proportion in the high category, suggesting a link between

 economic empowerment and reproductive health. Environmental factors, including access to safe drinking water and sanitation facilities, and issues like waterlogging and mosquito problems, also impact reproductive health outcomes across categories. Empowerment indicators such as financial control, freedom of choice, and participation in community organizations are associated with higher percentages in the high category, underlining the significance of agency in promoting reproductive health. Finally, experiences of domestic violence and overall life satisfaction exhibit notable disparities across categories, underscoring the need to address social and psychological factors that impact reproductive health alongside socioeconomic and environmental factors.

CORRELATES OF REPRODUCTIVE HEALTH AMONG SC POPULATION IN KERALA

The impact of socioeconomic factors on the Reproductive Health Index was analysed using multinomial logistic regression. The analysis was conducted in three models to examine both independent and combined effects of socioeconomic and demographic factors on reproductive health. The dependent variable was reproductive health status, which was measured by the estimated reproductive health index with three categories: low, medium, and high reproductive health status. The reference category for the dependent variable was low reproductive health status. This analysis aims to identify the likelihood of SC women attaining medium and high reproductive health statuses based on various background characteristics. The Chi-square test has been utilised to identify the most significant variables closely linked to the reproductive health status of the population. No multi collinearity has been observed between variables

Table 9: Model 1 - Effect of socioeconomic factors on the reproductive health index (Ref category – Low RH status)

Variables	Exp(B) Medium Health status	Exp(B) High health status
Age (Ref: 40-49)		
15-19	1.757	1.778
20-29	0.775	0.511
30-39	0.637	0.821
Marital status (Ref: Separated)		
Never married	2.639	0.963
Married	0.607	0.428
Widowed	0.336	0.297
Divorced	0.881	0.31
Age at marriage (Ref: >27)	.	
<16	0.838	0.263
17-19	1.075	0.21
20-26	1.199	0.421
Family Size (Ref: 4+)		
1-4	1.294	1.332
Schooling (Ever attend school).		
Never attend the school	0.535	0.434
Work Participation Rate (Ref: No)		
WPR	0.713*	0.457*
MGNREGA participation (No)		
MGNREGA participation	1.719**	1.356*
Income (Ref:Above 20000)		
Below 10000	2.423**	1.286
10000-20000	4.763*	0.885
Bank account (No)		
Yes	0.761*	1.107

Table 9 presents the results of the Multinomial Logistic Regression analysis assessing the influence of various socioeconomic factors on the reproductive health index (RH) among the study population, with "Low RH status" as the reference category. The Exp(B) values indicate the odds ratios associated with transitioning to either "Medium Health status" or "High Health status" in comparison to the reference group. Regarding age, women aged 15-19 demonstrated a significantly higher likelihood of achieving both medium and high health statuses compared to the reference group, with Exp(B) values of 1.757 and 1.778, respectively. In contrast, the age groups 20-29 and 30-39 exhibited decreased odds of attaining medium and high health statuses.

Marital status played a significant role, with never-married women having substantially higher odds of achieving medium health status (Exp(B) = 2.639) but lower odds of reaching high health status (Exp(B) = 0.963) compared to the reference group. Married, widowed, and divorced categories showed varied impacts on reproductive health statuses. Age at marriage also influenced reproductive health outcomes, with higher odds for medium and high health statuses in the age groups 17-19 and 20-26, while those below 16 had reduced odds.

Family size did not show a significant association with reproductive health statuses. In terms of education, individuals who never attended school had lower odds of achieving both medium and high health statuses. Work Participation Rate (WPR) was a significant factor, with a negative association between WPR and the odds of achieving both medium and high health statuses, as indicated by Exp(B) values of 0.713 and 0.457, respectively. MGNREGA participation exhibited a positive impact on the odds of achieving both medium and high health statuses. Income levels also played a

crucial role, with individuals earning below 10,000 and between 10,000-20,000 having higher odds of achieving medium health status, while those earning above 20,000 had reduced odds for both medium and high health statuses. Possession of a bank account showed a negative association with the odds of achieving medium health status but a positive association with high health status. In summary, the Multinomial Logistic Regression analysis highlights the varied impact of socioeconomic factors on different reproductive health statuses, providing valuable insights into the nuanced relationships within the study population.

Table 10: Model II - Effect of socioeconomic factors and environment on the reproductive health index

Variables	Exp(B) Medium Health status	Exp(B) High health status
Age (Ref: 40-49)		
15-19	1.757	1.778
20-29	0.775	0.511
30-39	0.637	0.821
Marital status (Ref: Separated)		
Never married	2.639	0.963
Married	0.607	0.428
Widowed	0.336	0.297
Divorced	0.881	0.31
Age at marriage (Ref: >27)	.	
<16	0.838	0.263
17-19	1.075	0.21
20-26	1.199	0.421
Family Size (Ref: 4+)		
1-4	1.294	1.332

Schooling (Ref: Ever attend school).		
Never attend the school	0.535	0.434
Work Participation Rate (Ref: No)		
WPR	0.714	0.48
MGNREGA participation (Ref: No)		
MGNREGA participation	1.745	1.494
Income (Ref: Above 20000)		
Below 10000	2.254	1.071
10000-20000	4.914	0.937
Bank account (Ref: No)		
Yes	0.775	1.173
Safe drinking water (Ref: no)		
Yes	1.419*	2
Sanitation (Ref: no)		
Yes	0.525*	0.365
Waterlogging (Ref: no)		
Yes	0.791*	0.573**
Mosquito Problem (Ref: no)		
Yes	0.757*	0.682*
Habitts (Ref: no)		
Yes	1.055*	0.631*
Tobacco (Ref: No)		
Yes	0.44*	0.36**
Drug use (Ref: No)		
Using Drugs	1.479	0.887
Alcohol consumption (Ref: No)		
Consumption of alcohol	0.947	1.197

In the multinomial logistic regression Model II, the goal is to understand the impact of socioeconomic factors and environmental

variables on the reproductive health (RH) index, with the reference category being "Low RH status." The exponentiated coefficients (Exp(B)) are used to derive odds ratios, providing insights into the likelihood of having Medium RH status or High RH status compared to the reference category.

In terms of age, individuals aged 15-19 exhibit 1.757 times higher odds of having Medium RH status and 1.778 times higher odds of having High RH status compared to those in the reference category. Conversely, individuals aged 20-29 and 30-39 show lower odds, indicating a 0.775 and 0.637 times likelihood for Medium RH status and a 0.511 and 0.821 times likelihood for High RH status, respectively. Marital status plays a significant role. Never-married individuals have 2.639 times higher odds of having Medium RH status but lower odds (0.963 times) of having High RH status compared to the reference category. Married, widowed, and divorced individuals all demonstrate reduced odds for both Medium and High RH status.

Age at marriage influences the likelihood, with those aged 17-19 and 20-26 having higher odds for Medium RH status (1.075 and 1.199 times, respectively) but lower odds for High RH status compared to the reference. Conversely, individuals below 16 years have lower odds for both Medium and High RH status. Family size (4+) is associated with higher odds for both medium (1.294 times) and High RH status (1.332 times). Educational factors indicate that individuals who never attended school have lower odds for both medium (0.535 times) and High RH status (0.434 times).

Work participation rate (WPR) and participation in MGNREGA both influence the likelihood of having Medium and High RH status, with odds ratios indicating the direction and magnitude of the effects. Income levels also play a role, with individuals earning

below 10000 and 10000-20000 showing higher odds for both Medium and High RH status compared to those above 20000.

Access to amenities such as safe drinking water and sanitation and the absence of waterlogging and mosquito problems all contribute to higher odds of having Medium and High RH status compared to the reference category. Behavioural patterns, including tobacco use, drugs, and alcohol consumption, also impact the likelihood of having Medium and High RH status, with odds ratios providing insights into the strength and direction of these associations. In summary, the findings from this multinomial logistic regression model highlight the multifaceted nature of factors influencing reproductive health status, providing valuable information for understanding and addressing specific risk factors associated with Medium and High RH status compared to the reference category of Low RH status.

Model III examined the combined impact of socioeconomic, environmental, and empowerment factors on reproductive health status. Participation in social groups and financial control were identified as major factors significantly correlated with achieving medium and high reproductive health statuses compared to the reference group.

In the multinomial logistic regression Model III , the analysis focuses on understanding the influence of socioeconomic, environmental, and empowerment factors on the Reproductive Health (RH) Index, with Medium Health status and High Health status as the outcomes compared to the reference category, presumably Low Health status.

Table 11: Model III - Effect of socioeconomic, environmental, and empowerment factors on the Reproductive Health Index

Variables	Exp(B) Medium Health status	Exp(B) High health status
Age (Ref: 40-49)	1.73	1.711
15-19	0.769	0.497
20-29	0.645	0.81
30-39	2.136	1.354
Marital status (Ref: Separated)		
Never married	2.757	1.046
Married	0.605	0.463
Widowed	0.316	0.29
Divorced	0.839	0.343
Age at marriage (Ref: >27)		
<16	0.85	0.255
17-19	1.075	0.213
20-26	1.199	0.42
Family Size (Ref: 4+)		
1-4	1.314	1.411
Schooling (Ref: Ever attend school)		
Never attend the school	0.554	0.446
Work Participation Rate (Ref: No)		
WPR	0.711	0.466
MGNREGA participation (Ref: No)		
MGNREGA participation	1.729	1.536
Income (Ref: Above 20000)		
Below 10000	2.242	1
10000-20000	4.911	0.954

Bank account (Ref: No)		
Yes	0.76	1.215
Safe drinking water (Ref: no)		
Yes	0.549	0.387
Sanitation (Ref: no)		
Yes	0.805	0.66
Waterlogging (Ref: no)		
Yes	0.734	0.672
Mosquito Problem (Ref: no)		
Yes	1.055	0.637
Tobacco use (No)		
Using tobacco	.435	0.375
Drug use (Ref: Not using drugs)		
Using Drugs	1.465	0.852
Alcohol consumption (Ref: No)		
Consumption of alcohol	0.967	1.179
Participation of Ayalkoottam (Ref: No)		
Yes	.968*	.711*
Financial Control (Ref: No)		
Yes	1.064	1.281
Freedom of Choice (Ref: No)		
Yes	1.047*	.752*
Experienced Domestic Violence (Ref: No)		
Yes	.724*	0.937
Satisfaction in Life (Ref: No)	.	
Yes	.863*	.716*

In terms of age, individuals aged 15-19 exhibit lower odds of having both Medium and High Health status compared to the reference category, with odds ratios of 0.645 and 0.810, respectively. On the other hand, individuals aged 30-39 show higher odds for both

medium (2.136) and High Health status (1.354) compared to the reference. Marital status plays a role in reproductive health, with never-married individuals having higher odds for both medium (2.757) and High Health status (1.046). Conversely, married, widowed, and divorced individuals demonstrate varied odds for Medium and High Health status.

Age at marriage also contributes to the likelihood, with those aged 17-19 and 20-26 having higher odds for Medium Health status (1.075 and 1.199, respectively) but lower odds for High Health status compared to the reference. Individuals below 16 years show lower odds for both Medium and High Health status. Family size (4+) is associated with higher odds for both medium (1.314) and High Health status (1.411). Educational factors indicate that individuals who never attended school have lower odds for both medium (0.554) and High Health status (0.446).

Work participation rate (WPR) and participation in MGNREGA influence the likelihood of having Medium and High Health status, with odds ratios indicating the direction and magnitude of the effects. Income levels also play a role, with individuals earning below 10000 and 10000-20000 showing higher odds for both Medium and High Health status compared to those above 20000. Access to amenities such as safe drinking water, sanitation, absence of waterlogging, and mosquito problems all contribute to higher odds of having Medium and High Health status compared to the reference category. Behavioural patterns, including tobacco use, drugs, and alcohol consumption, impact the likelihood of having Medium and High Health status, with odds ratios providing insights into the strength and direction of these associations.

Empowerment factors, including participation in Ayalkoottam, financial control, freedom of choice, experience of domestic violence, and life satisfaction, also contribute to the likelihood of

having Medium and High Health status, with odds ratios indicating the impact of these factors. In summary, the findings from this multinomial logistic regression model highlight the interconnected influence of socioeconomic, environmental, and empowerment factors on reproductive health status, providing valuable insights for understanding the factors associated with Medium and High Health status compared to the reference category, presumably Low Health status.

Summary and Conclusion

This study establishes that women's social life determines their reproductive health behaviour. There is a strong association between the various social, economic, environmental, behavioural, and health factors with reproductive health status, which is evident from the current study. Factors such as age, age at marriage, education, work participation, sanitation, and participation in Ayalkkoottam are the key determinants of the reproductive health status of SC women in Kerala. Women, especially among the deprived sections like scheduled caste, are silent sufferers of ill health throughout their life course mainly because of their poor socioeconomic status and lack of awareness and negligence of their own health. There is a need to create policies and programmes to improve women's standard of life in terms of better education, employment opportunities, and basic things like sanitation.

The reproductive health behaviour of SC women in Kerala is largely influenced by the socio-cultural norms and values of the state. The traditional gender roles and expectations of women in Kerala are still very much in place, and this has a direct impact on the reproductive health behaviour of SC women. Generally, SC women in Kerala are expected to marry young and have children soon after marriage. This often leads to early pregnancies and a lack of access to reproductive health services. Additionally, there is a lack of

awareness about contraception and family planning among SC women, which can lead to unintended pregnancies and unsafe abortions. Furthermore, there is a lack of access to quality healthcare services, which can lead to poor health outcomes for SC women.

Reference

DLHS, IIPS. "District Level Household and Facility Survey." *International Institute of Population Sciences, Mumbai, India* (2010).

World Health Organization. *International health regulations (2005)*. World Health Organization, 2008.