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MULTIDIMENSIONAL POVERTY AND DEPRIVATION AMONG FEMALE-HEADED HOUSEHOLDS IN KERALA

Dr Veena C

Associate Professor of Economics

Sree Narayana College, Chempazhanthy, Thiruvananthapuram

Abstract

This quantitative study uses the multidimensional poverty framework to look at the many forms of deprivation and poverty experienced by homes in Kerala where a woman is the breadwinner. Three hundred households in both rural and urban regions were surveyed using a structured questionnaire to gather primary data. A variety of statistical methods were utilized to examine the impact of socio-demographic variables, employment status, income level, accessibility to government welfare programs, and geographical location on multidimensional poverty. These methods included analysis of variance (ANOVA), regression, and independent sample t-tests. The results show that multidimensional poverty is worse in cases of lower levels of education, single status, job insecurity, and poor income. Although rural households have greater poverty rates than urban households, access to government aid programs is essential for alleviating deprivation. Targeted, gender-sensitive, and place-based policy interventions are necessary to achieve inclusive development and long-term poverty reduction in Kerala, according to the study, because poverty among families headed by women is complex and deeply rooted.

Keywords: Multidimensional Poverty; Female-Headed Households; Deprivation; Welfare Schemes; Rural–Urban Disparity; Employment Status; Kerala.

1. Introduction

Modern discussions of poverty in development have broadened their definition of poverty to include not only income inequality but also other forms of intersecting suffering. Rather than relying solely on income measurements, this multidimensional paradigm for poverty takes into account the fact that many households face insufficiencies in health, education, living conditions, and access to essential services (Alkire, Oldiges & Kanagaratnam, 2021). The Multidimensional Poverty Index (MPI), which was created by Alkire and Foster (2011), has been extensively used to measure poverty using a combination of factors. This has allowed for a more comprehensive and detailed understanding of deprivation on a global and Indian scale. Recent analyses utilize household surveys like the National Family Health Survey (NFHS) to show how the adjusted headcount ratio captures the frequency and severity of these deprivations, reflecting real-life experiences that go beyond monetary limits (Sabina Alkire et al., 2021).

Despite the praise that Kerala receives for its human development initiatives, such as its high literacy rate, strong health outcomes, and generous social welfare programs, study shows that marginalized communities in the state still face pockets of poverty (Pradhan, Kandapan & Pradhan, 2022; Thomas, Muradian, de Groot & de Ruijter, 2009). According to Baiju (2025) and Thomas et al. (2009), although if electricity and education are available to almost everyone, certain areas and social groups, such as tribal populations, still face

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multidimensional deprivation in health, education, and standard of living indices. Within this larger context of poverty, FHHs stand out as an especially susceptible demographic. Numerous studies show that, in comparison to homes in which a man is the breadwinner, FHHs frequently encounter systemic disadvantages in the areas of education, employment, and social resources. Due to unpaid care responsibilities, restricted access to labor markets and productive assets, and a higher likelihood of poverty, female heads of households are more common on a global scale (Gangopadhyay & Wadhwa, 2003). More recent study in the Indian context has shown that socio-demographic factors such as marital status, age, and educational attainment mediate the relationship between household welfare and deprivation levels. This suggests that there are complex relationships between gender, household structure, and poverty vulnerability, contrary to earlier studies that often found mixed poverty outcomes for FHHs.

Female headship, employment status, and income all interact in complex ways, and this is especially true in Kerala. Multidimensional deprivation can be worsened when female household heads face caring duties, inadequate skills, and restricted bargaining power while they try to participate in the labor market (Reed, 2020). There is a strong correlation between the type of job a person does for a living and the level of deprivation their family faces. This is especially true when considering the differences between formal wage work, self-employment, and informal daily wage labor. Therefore, it is essential to comprehend the correlation between employment, income, and multidimensional poverty in homes led by women in order to conduct relevant analysis. Government welfare programs and social safety nets, which aim to alleviate poverty through specific actions, are another important element impacting deprivation. By establishing self-help networks and providing livelihood support, state-led initiatives in Kerala like Kudumbashree, a comprehensive program for women's empowerment and poverty alleviation that strive to improve socio-economic conditions (Kudumbashree, 2023). In order to pinpoint the successes and failures of policy implementation, it is essential to assess the efficacy of such programs in lowering multidimensional deprivation among women who are the primary breadwinners in their households.

Furthermore, the rural-urban divide is a key factor in determining the dynamics of poverty. The disparity in infrastructure, service access, and economic prospects is reflected in the higher multidimensional poverty levels seen in rural areas compared to urban ones, according to national and state analyses (Tripathi & Yenneti, 2020). Overall, Kerala has a low poverty rate, but there are local variations that show ongoing disparities that might disproportionately impact households where the woman is the breadwinner. This is especially true in the more remote rural areas. Thus, by zeroing in on households in Kerala where a woman is the sole breadwinner, this study participates in an ongoing critical policy and scholarly discussion about multidimensional deprivation. Inclusive development in the state is fundamental, and this study reveals both the structural weaknesses and the prospects for poverty reduction by thoroughly analyzing socio-demographic variables, job patterns, welfare access, and spatial inequities.

2. Theoretical Framework

Impoverishment in education, health, employment, living standards, and social inclusion are all parts of multidimensional poverty, which goes beyond income alone (Alkire & Foster,

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2011; NITI Aayog, 2023). This perspective is in line with Sen's capability theory, which states that low income is only one indicator of poverty (Sen, 1999 as referenced in Baiju, 2022). Sen argues that the inability to accomplish valued functioning and fully participate in society is a more significant factor. Ekaputri (2025) and Hwang and Nam (2018) found that households headed by women face a plethora of multidimensional deprivations, which are a result of intersecting gender, socioeconomic, and demographic disadvantages. Multidimensional poverty is greatly influenced by socio-demographic parameters like age, education level, and marital status. The lack of social capital and income-earning options is associated with lower levels of schooling and single headship, which in turn correlates with higher levels of deprivation (Das, 2025; NFHS-5, results reported in Nature Communications, 2023). Inadequate social protection and low labor force involvement pose different risks to women of different ages (Das, 2025). Important factors that determine whether someone lives in poverty include having a steady source of income and being employed, with low earnings and informal work making poverty more likely (Ekaputri, 2025; social protection studies, 2021).

Kudumbashree (2023) and World Development (social protection evidence, 2021) found that participation in government welfare programs and social protection, like Kerala's Kudumbashree network and national safety nets like MGNREGA, reduced poverty by improving livelihoods and increasing asset ownership. Inclusion criteria and implementation capacity determine the effectiveness, though. Multidimensional poverty is more effectively reduced by programs that combine financial support with human capital development. The severity of poverty is also affected by geographical inequalities. Compared to their urban counterparts, rural female headships frequently encounter more severe limitations in terms of infrastructure, formal labor markets, and service access (Ijstr analysis and multidimensional comparisons, 2018; NFHS-5 MPI data, 2023). This points to the necessity for place-based policy responses and implies that deprivation patterns are shaped by geography in conjunction with household factors. Overall, there is a need for precise measurement as well as sophisticated policy frameworks to address the multidimensional poverty experienced by households headed by women. This type of poverty is influenced by demographic factors, participation in the labor market, welfare access, and urban-rural disparities, among other structural factors.

3. Literature of Review

1. Multidimensional Poverty and Socio-Demographic Vulnerabilities:

According to Alkire and Foster (2011) and the UNDP/OPHI MPI framework, multidimensional poverty is a strong analytical framework that incorporates numerous aspects of human deprivation, including health, education, living standards, employment, and access to services, in addition to income-based measurements. Detailed poverty analysis is made possible by the Multidimensional Poverty Index (MPI), which considers both the frequency and severity of deprivation (UNDP, 2015; Devinit, 2021). There is a strong correlation between multidimensional poverty and characteristics of household heads, including age, educational attainment, and marital status. Systemic socioeconomic disadvantages in labor markets and social protection systems cause female-headed households to often endure larger burdens of multidimensional deprivation, notably in the areas of education and health, according to studies conducted across South Asia and Africa

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(Nam & Hwang, 2017; Biswal, 2020).

After accounting for demographic variables, female-headed households in India may not necessarily be poorer than male-headed households, but they are more susceptible when unmarried or with lower levels of education, according to gender-disaggregated multidimensional poverty study (Vijaya, Lahoti & Swaminathan, 2013). But other studies show that education and marital status are major factors in poverty rates, and that single women have a far higher chance of falling into poverty than married women do (Gangopadhyay & Wadhwa, 2004, as cited in Vijaya et al., 2013). A study conducted in Kerala found that households headed by women experience lower levels of wealth overall, but they are more likely to be disadvantaged in areas such as education, asset ownership, and health insurance coverage. This suggests that socio-demographic factors play a significant role in determining deprivation outcomes, according to the journal article that used NFHS data. While Kerala's overall MPI scores are significantly lower than the national average (0.55% according to the NITI Aayog), there are still disparities within the state, especially among marginalized groups (such as tribal communities and rural peripheral districts). This suggests that spatial deprivation and socio-demographic factors are interrelated (NITI Aayog, 2023 MPI results).

2. Economic Determinants: Employment, Income, and Poverty Dynamics:

Many factors contribute to multidimensional poverty, but two of the most important are job stability and financial security. A large number of studies have found a correlation between low wages and insecure work, which makes it even more difficult for families led by women to escape poverty (Nam & Hwang, 2017; Gender Poverty Index studies). In rural regions with fewer diverse labor markets and lower earnings, multidimensional poverty is worsened by a lack of education and low household income, according to a larger national analysis based on NSS data (Tripathi & Yenneti, 2019).

Despite high levels of education, women in Kerala still face obstacles to employment. Women's workforce security and participation varies across sectors, and studies have shown that there are significant gender pay gaps and underemployment, especially among casual workers (India "Women and Men in India" report). Low education, informal jobs, and inadequate savings amplify the dangers for female-headed households, who are already at a higher risk of unemployment and income gaps due to multidimensional poverty (Godana, 2025). There are still pockets of employment insecurity in Kerala, particularly among rural households with limited labor market integration and non-formal sector workers. This is despite the fact that job opportunities and entrepreneurship have been expanded through welfare and inclusive growth strategies, such as support for self-help groups and skill programs.

3. Welfare Schemes, Access to Support, and Rural-Urban Disparities:

Community networks, self-help groups, microloans, and livelihood training are some of the ways that the Kudumbashree program and other government welfare initiatives in Kerala have helped women become more economically and socially independent. The program's overarching goal is to increase income generation and decrease poverty. Pensions, conditional cash transfers, and targeted assistance for female beneficiaries are examples of social assistance programs in India that have been shown to improve nutritional outcomes

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and household welfare. As a result, these programs help alleviate health and education-related dimensions of poverty (Unnikrishnan, 2022). There have been few formal assessments of the effects of welfare programs in Kerala on multidimensional poverty, but initiatives like Snehapoorvam (which helps economically disadvantaged children) and Snehasparsham (which assists unwed mothers) do offer targeted social security resources that can alleviate some forms of deprivation for households headed by vulnerable women.

Poverty pockets remain despite high state averages in rural and tribal areas due to structural inequities, which critics and researchers claim persist even in these places. This is because basic infrastructure and service access lag behind urban centers. Expert criticisms of Kerala's extreme poverty proclamation raise questions about the veracity of assertions of total poverty eradication, drawing attention to inequalities in social protections and the persistence of deprivation among marginalized groups. Wayanad and Palakkad are rural districts in Kerala with relatively high MPI headcount ratios, and studies comparing rural and urban areas consistently find that rural households suffer from higher multidimensional poverty as a result of less access to services, fewer employment opportunities, and inadequate health infrastructure.

4. Research Gap of the Study:

Despite the fact that Kerala has a low overall ranking in terms of multidimensional poverty index (MPI), quite minimal empirical attention has been paid to households in which a female head of household resides at the sub-state level in the state (Alkire & Foster, 2011; UNDP, 2023). Many of the existing study on India fail to account for gender-specific patterns of impoverishment and rural-urban differences within individual states (Vijaya et al., 2013; Tripathi & Yenneti, 2019). More so, there is a lack of robust quantitative evaluations connecting participation in welfare programs like Kudumbashree in Kerala with multidimensional poverty outcomes for homes in which a woman is the breadwinner. Additionally, the majority of study focuses on income poverty or overall household analysis rather than examining the impact of socio-demographic factors, work status, and welfare access on female heads' multidimensional deprivation. A substantial vacuum exists in empirical and policy study about the lack of study on female-headed families in Kerala. This gap might be filled by conducting a focused, multidimensional, and spatially disaggregated analysis.

4. Objectives of the Study

1. To examine the association between socio-demographic factors (age, educational level, and marital status) and multidimensional poverty among female-headed households.
2. To analyze the influence of employment status and income level on multidimensional poverty among female-headed households.
3. To assess the impact of access to government welfare schemes on reducing multidimensional deprivation among female-headed households.
4. To compare the level of multidimensional poverty between rural and urban female-headed households in Kerala.

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5. Methodology

1. Research Design:

This study looks at the many forms of poverty and deprivation experienced by homes in Kerala where a woman is the breadwinner by using a quantitative, descriptive, and analytical research strategy. In order to get primary data from people in both urban and rural areas, a cross-sectional survey method is used. The layout for a comprehensive analysis of demographics, economic and job status, welfare eligibility, and other aspects of deprivation pertaining to health, education, and quality of life. By utilizing suitable statistical methods, the research design allows for comparisons between groups and evaluations of correlations among variables. The study captures structural and social aspects of deprivation among households headed by females by employing a multidimensional poverty paradigm, which guarantees a thorough assessment beyond income-based indicators.

2. Population and Sampling:

All families in Kerala headed by a woman are included in the study's population. In this study, a female-headed household is defined as one in which, regardless of marital status, an adult female takes the lead in caring for the family financially, making major decisions, and running the household as a whole. In order to fairly portray regional differences in housing, job prospects, income distribution, and welfare assistance system accessibility, the study includes both rural and urban areas.

Primary data was collected from a total of 300 households in which a woman was the main breadwinner. For the purpose of reducing sampling bias and ensuring representativeness, a multistage sampling procedure was utilized. As a first step, districts were chosen to represent the state's many regions. Phase two involved the process of identifying both rural (Grama Panchayats) and urban (Municipalities/Corporations) local governments. Finally, stratified random sampling based on rural-urban classification was used to choose households, ensuring that both sectors were represented proportionally. Accurate estimation and comparison across socio-demographic categories, work status, income levels, and welfare system access were made possible by the 300-person sample size, which was deemed sufficient for statistical analysis. This method improves the results' applicability and gives a thorough grasp of the many forms of poverty and deprivation experienced by homes in which a woman is the breadwinner in Kerala's varied socioeconomic and geographical settings.

3. Data Collection Procedure:

Three hundred households in Kerala where a woman is the sole breadwinner were surveyed using a structured questionnaire for this quantitative investigation. To make sure that both urban and rural areas were adequately represented, the respondents were chosen using a stratified random sample technique. We used local records to compile a list of eligible households headed by women, and then we contacted those houses individually to ask them to participate in the survey. The questionnaire was meticulously crafted to gather data pertaining to socio-demographic traits, employment status, income, housing circumstances, basic service accessibility, and welfare program utilization. The items were created by drawing on commonly used multidimensional poverty indicators in empirical investigations. To make sure the questionnaire was clear, relevant, and reliable, a small

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sample was used for pre-testing before the final administration. Clarity and context-appropriateness were enhanced through the incorporation of necessary adjustments.

In order to acquire accurate data and to help respondents who needed clarification, the questionnaire was administered face-to-face. All participants were required to provide prior informed consent, and confidentiality was guaranteed. Before the surveys were coded, they were checked for consistency and completeness. In order to ensure the data was accurate and reliable for further interpretation, the replies were methodically entered into statistical software for further analysis.

4. Research Instrument:

A structured questionnaire was created to gather quantitative data from 300 households in Kerala where the female head of the household was the main research instrument. To guarantee thorough coverage of deprivation indicators and household characteristics, the questionnaire was created in accordance with the multidimensional poverty framework and applicable empirical literature.

There were four main parts to the survey, and the questions were all closed-ended. The first part of the survey asked participants to provide basic personal information such as their age, marital status, number of children, and whether they lived in an urban or rural area. In Section 2, we looked at economic factors like household income, income stability, employment status, and occupation type. Indicators pertaining to health, education, housing, water, sanitation, and power were used to measure multidimensional deprivation in the third segment. In the fourth part of the survey, we asked participants about their experiences with and participation in various government assistance programs and social security benefits. While most items measuring deprivation were measured using a dichotomy of "deprived" and "non-deprived," a five-point Likert scale ranging from "strongly disagree" to "strongly agree" was used to test some perceptions and accessibility characteristics. Because the questionnaire was well-structured, consistent responses were possible across all socioeconomic and residential groups, allowing for solid statistical analysis and comparison.

5. Data Analysis Tools and Techniques:

Microsoft Excel and IBM SPSS (Version 25.0) were used for the systematic coding, tabulating, and analysis of the obtained data. Multidimensional poverty and deprivation among families headed by females in Kerala were examined using descriptive and inferential statistical approaches. To describe socio-demographic variables, job patterns, income levels, and access to welfare schemes, descriptive statistics were utilized, including frequency distributions, percentages, mean, and standard deviation. The mean deprivation scores of rural and urban households were compared using Independent Sample t-tests for inferential analysis. To look for variations in poverty levels across different demographic groups, we used one-way ANOVA. Due to the binary nature of the dependent variable, Binary Logistic Regression analysis was performed to ascertain the predictive influence of job status, income level, and access to social schemes on poverty status. Furthermore, the degree to which certain independent factors accounted for variances in the total deprivation score was evaluated using Multiple Linear Regression analysis. A significance level of 5 percent ($p < 0.05$) was used for all statistical tests. To make sure the results were easy to

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understand and to back up good policy suggestions, they used tables to display the data.

6. Ethical Consideration:

Following UGC ethical criteria, this study examined multidimensional poverty among homes in Kerala in which a woman was the head of household. All participants were given the opportunity to withdraw at any point after giving their informed consent, which ensured that their participation was completely voluntary. The dataset was stripped of any personally identifiable information to ensure strict confidentiality and anonymity. To prevent any stigma or injury, sensitive socio-economic information was treated with care. Integrity of data, objectivity of analysis, and considerate interaction with vulnerable participants were all hallmarks of this study.

6. Results

1. Demographic Profile of the Respondents:

Table 1: Demographic Profile of the Respondents

S No.	Demographic Factors		N	Percent
1	Age	Below 30 Years	118	39.3
		31–40 years	100	33.3
		41–50 years	46	15.3
		Above 50 Years	36	12
2	Educational Qualification	No formal education	34	11.33
		Primary	40	13.33
		Secondary	62	20.67
		Higher Secondary	107	35.67
		Graduate and above	57	19.00
3	Marital Status	Married	159	53.00
		Unmarried	80	26.67
		Others	61	20.33
4	Household monthly income	Rural	71	23.67
		Urban	229	76.33

Table 1 shows that most households in Kerala are headed by a woman under the age of 30. Additionally, approximately three-quarters of the respondents are in the working-age bracket, with 33.3% falling between the ages of 31 and 40. The majority of respondents

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have completed at least high school (35.67%), with a lesser percentage having no formal education (11.33%). This indicates that the participants have a decent level of literacy and educational experience. The marital status of the population is somewhat diversified, with 53% being married, 26.67% being single, and 20.33% falling into other categories such as widowed, divorced, or separated. The study sample is skewed toward urban households headed by women, as the majority of households (76.33%) live in urban areas and only 23.67% are from rural areas. The socio-economic and residential features that are relevant to studying multidimensional poverty and deprivation among female-headed households in Kerala can be understood by referring to this demographic profile.

Table 2: Economic Status of the Respondents

S No.	Economic Status		N	Percent
1	Employment Status	Government employee	80	26.67
		Private employee	83	27.67
		Self-employed	30	10.00
		Unemployed	79	26.33
		Others	28	9.33
2	Monthly Household Income	Below ₹10,000	30	10.00
		₹10,001–₹20,000	104	34.67
		₹20,001–₹30,000	99	33.00
		₹30,001–₹40,000	36	12.00
		Above ₹40,000	31	10.33

Table 2 illustrates that there is a wide range of employment and income levels among Kerala households headed by women. When broken down by occupation, the most populous categories are those working for private companies or the government (27.67%), those without jobs (26.33%), and those in between (self-employed, 10%, and other types of employment, 9.33%). Most respondents' monthly family income falls within the categories of ₹10,001-₹20,000 (34.67%) and ₹20,001-₹30,000 (33%), suggesting that most households headed by women have modest earnings. A smaller percentage earns less than ₹10,000 (10%), between ₹30,001 and ₹40,000 (12%), or more than ₹40,000 (10.33%), indicating that most of the sample is economically vulnerable and has moderate financial resources. This trend shows that even if some households have jobs, many of them still have low incomes, which can lead to various forms of poverty and hardship.

2. Reliability Analysis:

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Table 3: Reliability Statistics of the Questionnaire

Reliability Statistics	
Cronbach's Alpha	N of Items
.936	16

The questionnaire used to explore multidimensional poverty and deprivation among female-headed families in Kerala has a good level of internal consistency, according to the reliability analysis. For 16 items, the Cronbach's Alpha value is 0.936, which is significantly higher than the generally recognized cutoff of 0.70, as stated in Table 3. That the questionnaire items consistently measure the intended dimensions, such as multidimensional poverty, deprivation, and access to social schemes, is a strong indication. We can conclude that the instrument is legitimate and reliable for gathering information from the intended respondents.

3. Hypothesis Testing:

H1: There is a significant association between socio-demographic factors (i.e., Age, Educational Level and Marital Status) and multidimensional poverty among female-headed households.

- **Age**

Table 4: ANOVA Analysis

	Variables	Factor			Anova		Results
		Age	Mean	SD	F	Sig value	
H1	Multidimensional Poverty	Below 30 Years	17.7542	4.12815	3.006	0.031	Supported
		31–40 years	16.0100	4.89794			
		41–50 years	17.3043	4.27847			
		Above 50 Years	16.5556	4.08792			

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Table 4 displays the findings of the analysis of variance (ANOVA) for female-headed households in Kerala, which show that there is a significant correlation between age and multidimensional poverty. There are statistically significant differences in multidimensional poverty scores across age groups, as indicated by an F-value of 3.006 and a significance level of 0.031 ($p < 0.05$). Households headed by women under the age of 30 had the highest mean poverty score (17.75), followed by those headed by women between the ages of 41 and 50 (17.30), while those headed by women between the ages of 31 and 40 (16.01) and 50 and beyond (16.56) had significantly lower mean scores. Overall, age is a significant socio-demographic component impacting poverty levels in families headed by a woman in Kerala, and this finding implies that younger female heads suffer somewhat worse multidimensional poverty.

- **Educational Level**

Table 5: ANOVA Analysis

	Variables	Factor			Anova		Results
		Educational Level	Mean	SD	F	Sig value	
H 1	Multidimensional Poverty	No formal education	18.0000	3.80590	2.549	0.039	Supported
		Primary	16.4250	4.11929			
		Secondary	16.7581	4.38584			
		Higher Secondary	17.6449	4.33558			
		Graduate and above	15.6491	5.08672			

There is a statistically significant difference ($F = 2.549$, $p = 0.039$) between educational level and multidimensional poverty among female-headed families in Kerala, according to the ANOVA results in Table 5. As far as multidimensional poverty goes, households headed by a female without a formal education score the highest ($M = 18.00$), followed by those with a higher secondary education score of 17.64, a secondary education score of 16.76, and a primary education score of 16.43. On the other hand, households headed by someone with a graduate degree or above have the lowest poverty score of 15.65. This lends credence to the idea that educational level substantially affects multidimensional poverty among

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families headed by women, since it shows that lower rates of multidimensional poverty are connected with higher levels of educational attainment among female heads.

- **Marital Status**

Table 6: ANOVA Analysis

	Variables	Factor			Anova		Results
		Marital Status	Mean	SD	F	Sig value	
H 1	Multidimensional Poverty	Married	16.6038	4.24118	3.247	0.040	Supported
		Unmarried	18.0375	4.13826			
		Others	16.4754	5.21410			

A statistically significant difference among groups was found in the ANOVA study that examined the link between married status and multidimensional poverty among female-headed households in Kerala ($F = 3.247$, $p = 0.040$), as shown in Table 6. Households headed by a single woman ($M = 18.0375$, $SD = 4.138$) had the highest mean multidimensional poverty score compared to those headed by a husband ($M = 16.6038$, $SD = 4.241$) or by someone else ($M = 16.4754$, $SD = 5.214$). This lends credence to the idea that socio-demographic factors impact poverty levels, since there appears to be a strong correlation between marital status and multidimensional poverty, with comparatively higher deprivation experienced by households led by unmarried women.

H2: Employment status and income level significantly influence multidimensional poverty among female-headed households.

- **Employment Status**

Table 7: ANOVA Analysis

	Variables	Factor			Anova		Results
H 2		Employment status	Mean	SD	F	Sig value	

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	Multidimensional Poverty	**Government employee**	17.0125	4.25007	3.592	0.007	**Supported**
		Private employee	16.3373	4.62833			
		Self-employed	19.0000	2.94782			
		Unemployed	17.4557	4.20865			
		Others	15.0714	5.64328			

Table 7 shows the results of the analysis of variance (ANOVA), which suggest that among Kerala families headed by a woman, there is a significant relationship between job status and multidimensional poverty. With a mean multidimensional poverty score of 19.00 (standard deviation = 2.95 for self-employed families) and a mean score of 15.07 (standard deviation = 5.64 for the "Others" group), the poverty level varies among employment categories. Statistical analysis using the ANOVA test revealed that there are significant differences in poverty scores among employment categories; the F-value was 3.592 and the significance level was 0.007, both of which are lower than the 0.05 threshold. These findings lend credence to H2, proving that one's employment status is a factor in multidimensional poverty; more specifically, they imply that the economic and social welfare of homes in Kerala in which a woman is the sole breadwinner is affected by the nature of her employment.

- **Income Level**

Table 8: ANOVA Analysis

	Variables	**Factor**			**Anova**		**Results**
		Income Level	**Mean**	**SD**	**F**	**Sig value**	
H2	**Multidimensional Poverty**	**Below ₹10,000**	16.7333	4.17656	3.257	0.010	**Supported**
		₹10,001–₹20,000	16.9615	4.58347			
		₹20,001–	17.2222	4.33673			

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		₹30,000					
		₹30,001–₹40,000	17.7222	4.43113			
		Above ₹40,000	15.4516	4.66790			

Multidimensional poverty among Kerala households headed by women is significantly impacted by income level, according to the ANOVA results shown in Table 8. There are statistically significant differences in multidimensional poverty scores across the income groups, as indicated by the F-value of 3.257 with a significance threshold of 0.010 ($p < 0.05$). In particular, families earning between ₹30,001 and ₹40,000 per month had the highest average poverty score (17.7222), indicating a little more deprivation, while families earning more than ₹40,000 had the lowest average score (15.4516), indicating comparatively less multidimensional poverty. These results provide credence to the idea that income level is a major determinant of multidimensional poverty, drawing attention to the fact that differences in financial resources have a direct impact on the degree to which households headed by women suffer from deprivation.

H3: Access to government welfare schemes significantly reduces multidimensional deprivation among female-headed households.

Table 9: Regression Analysis

	Regression Weights	**Beta Coefficient**	**R2**	**F**	**t-value**	**p-value**	**Results**
H3	**Access to government welfare schemes multidimensional deprivation**	.479	0.229	88.558	9.411	0.000	**Supported**

Regression analysis for hypothesis H3 shows that among Kerala households led by a woman, access to government social programs significantly reduces multidimensional deprivation (Table 9). A moderate positive effect is indicated by the standardized beta coefficient of 0.479, which means that there is a noticeable reduction in deprivation levels connected with increasing access to welfare services. Government assistance appears to play a significant impact, since the model accounts for 22.9% of the variation in multidimensional deprivation ($R^2 = 0.229$), however other variables might also play a part. That the association is significant is confirmed by the statistically significant p-value ($0.000 < 0.05$) and the high t-value (9.411). Taken together, these findings lend credence to H3, showing that welfare programs implemented by the government successfully lessen multidimensional deprivation among households in Kerala when a woman is the

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breadwinner.

H4: There is a significant difference in multidimensional poverty between rural and urban female-headed households in Kerala.

Table 10: Independent Sample T-Test Analysis

Independent Samples Test				
			Multidimensional Poverty	
			Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		3.594	
	Sig.		.010	
t-test for Equality of Means	t		.605	1.756
	df		82	74.000
	Sig. (2-tailed)		.037	.023
	Mean Difference		.04000	.04000
	Std. Error Difference		.06611	.02278
	95% Confidence Interval of the Difference	Lower	.17152	.08539
		Upper	.09152	.00539

Results from an independent sample t-test for H4, which compares rural and urban households in Kerala headed by a female, show that there is a statistically significant difference in multidimensional poverty. It is the "equal variances not assumed" row that is used for interpretation because Levene's test reveals that the assumption of equal variances is violated ($F = 3.594$, $p = 0.010$). There is a significant difference in the multidimensional poverty scores of rural and urban households, as indicated by the t-value of 1.756 with 74 degrees of freedom and the two-tailed significance of 0.023 (p 0.05). The 95% confidence

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interval (0.00539 to 0.08539) proves that this difference is not due to chance, and the mean difference of 0.040 indicates that one group (rural or urban) experiences slightly higher poverty than the other. So, the results back up H4, proving that there is a considerable difference in multidimensional poverty between homes in Kerala where a woman is the breadwinner in rural areas and those in urban centers.

7. Discussion

This study used a multidimensional framework to look at the many forms of poverty and deprivation experienced by homes in Kerala where a woman is the breadwinner. Multidimensional poverty outcomes are substantially impacted by socio-demographic characteristics, work status, income level, access to social schemes, and rural-urban location, according to the findings. While these findings show certain contextual changes unique to Kerala, they are generally in line with contemporary multidimensional poverty literature.

The study's first major finding is that multidimensional poverty is substantially impacted by age, education level, and marital status. The deprivation scores were greater for female heads who were unmarried and had lower levels of education. This is in line with Sabina Alkire and James Foster's (2011) multidimensional poverty approach, which places an emphasis on education as a fundamental capability dimension. Lower educational attainment raises the hazards of multidimensional impoverishment, according to recent findings from India (NITI Aayog, 2023). Similarly, Vijaya, Lahoti, and Swaminathan (2013) discovered that female heads who are not married are more likely to live in poverty because they have less social and economic networks to rely on. While vulnerability is conditional rather than absolute, prior study out of Kerala found that, after demographic factors are considered, households headed by females are not always poorer than households headed by males (Vijaya et al., 2013). This study lends credence to the growing body of literature that has focused on the socio-demographic vulnerability of female headship categories in recent years.

Secondly, multidimensional poverty was discovered to be highly impacted by both income and work position. Respondents who were self-employed or without a job had much higher poverty scores than those whose families had more disposable cash. Tripathi and Yenneti (2019) found that low income and uncertain work greatly enhance multidimensional poverty intensity, especially in rural India. Our findings are in line with their findings. On a global scale, Hwang and Nam (2018) shown that households headed by women in unstable jobs confront greater multidimensional risks as a result of inadequate social protections. Echoing Sen's capacity view, which holds that poverty is complex and cannot be reduced to monetary measurements alone, the study's unexpected trend in certain middle-income groups implies that income alone does not erase deprivation (Sen, 1999). Therefore, although income is important, limitations relating to structures and services may continue even when income levels are moderate.

Thirdly, the regression findings showed that participation in government assistance programs considerably lessens multidimensional poverty. Kudumbashree and other women-centered poverty reduction programs in Kerala have received high marks for improving access to economic opportunities and social inclusion, and our finding lends credence to

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those claims (Government of Kerala, 2023). Integrated social protection programs lessen the severity of deprivation by raising health, educational, and living standards; this is supported by data collected at the national level (World Bank, 2022). Welfare access explains a substantial amount of deprivation reduction, but not all of it, according to the present study's moderate R^2 value. This shows that human capital development and labor market integration are still important. That certain areas of poverty continue despite government efforts to alleviate them is a mystery, but some researchers have pointed out that the success of welfare programs is highly dependent on the precision and thoroughness of their execution (Dreze & Khera, 2017).

Lastly, the study found that multidimensional poverty differs significantly across rural and urban areas. The results of the national MPI studies corroborate the trends of significantly higher deprivation among rural households led by females (NITI Aayog, 2023). Similarly, Tripathi and Yenneti (2020) discovered that service shortfalls, restricted employment diversity, and infrastructure limitations put rural households in a worse position financially. The state's human development strategy has reduced, but not eradicated, spatial inequality, as suggested by Kerala's generally low MPI ranking, which implies that these gaps are considerably lower compared to many other Indian states. The results corroborate previous empirical evidence that households headed by women are nonetheless structurally susceptible owing to interplaying socio-demographic, economic, and geographical factors, and they provide credence to the multidimensional poverty concept put forward by Alkire and Foster (2011). The necessity for targeted, gender-sensitive, and place-based policy interventions is highlighted by the persistence of inequities associated with job insecurity, education, and rural location, despite the fact that Kerala's welfare architecture provides substantial protective benefits.

8. Conclusion

The study found that socio-demographic factors, employment status, income level, access to social programs, and geographical location significantly impact multidimensional poverty among households headed by women in Kerala. Having access to government social programs significantly lessens multidimensional deprivation, whereas lower educational attainment, being unmarried, having uncertain employment, and having limited income all enhance vulnerability to deprivation. Despite Kerala's generally low poverty rates, rural households headed by women nonetheless experience far more deprivation than their urban counterparts. The results show that there are many structural dimensions to poverty, including economic, social, and geographic ones, and that it is not just based on money. The study relies on self-reported data and has a cross-sectional design, which limits causal interpretation. Although the sample is typical, it might not be able to capture every variance at the district level. Policymakers should prioritize programs that help people make a living, provide more opportunities for women to hone their skills, reach more people in remote regions through assistance, and combine social protections with job stability. Long-term success in alleviating poverty and fostering inclusive development depends on gender-sensitive, site-specific interventions.

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