



Research Paper

# Determinants of Women's Rights Awareness in Rural India: A Caste-Based Analysis with Multiple Regression Modeling

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## Abstract

Women's rights awareness constitutes a foundational prerequisite for gender equality achievement, empowerment realization, and social transformation in patriarchal societies. Despite constitutional guarantees and legislative frameworks protecting women's rights in India, awareness levels remain heterogeneous across social strata, with caste stratification emerging as a persistent determinant of knowledge access and rights consciousness. This empirical investigation examines determinants influencing women's rights awareness levels across caste categories in Krishna District, Andhra Pradesh, India. Employing a stratified random sampling methodology, primary data were collected from 90 women distributed proportionally across four caste categories: Scheduled Castes (27.8%, n=25), Backward Classes (44.4%, n=40), Other Backward Classes (16.7%, n=15), and Forward Castes (11.1%, n=10), reflecting district demographic composition. Data collection utilized structured questionnaires administered through personal interviews, with analysis encompassing descriptive statistics, chi-square tests of independence, and multiple regression modeling. Findings reveal statistically significant caste-based disparities in awareness levels ( $\chi^2=18.67$ ,  $p=0.005$ ), with Forward Castes demonstrating superior awareness (80% high awareness) compared to Scheduled Castes (32%). Educational attainment emerges as the strongest predictor of awareness ( $\beta=0.512$ ,  $p<0.001$ ), followed by media exposure ( $\beta=0.328$ ,  $p=0.002$ ) and income levels ( $\beta=0.247$ ,  $p=0.015$ ), while age demonstrates negative association ( $\beta=-0.186$ ,  $p=0.048$ ). The regression model explains 68.4% of variance in awareness levels ( $R^2=0.684$ ,  $F=15.83$ ,  $p<0.001$ ). Caste affiliation maintains significant independent effects even after controlling for socioeconomic variables, indicating structural discrimination beyond material disadvantage. Employment status and urban residence show positive but non-significant relationships. Results underscore multidimensional intervention requirements encompassing education expansion, targeted awareness campaigns for marginalized castes, media accessibility enhancement, economic empowerment initiatives, and structural discrimination dismantling. Policy implications extend to educational curriculum integration, community-based awareness programs, legal literacy initiatives, and affirmative action strengthening for historically disadvantaged communities.

**Keywords:** Women's rights awareness, caste discrimination, gender equality, multiple regression analysis, chi-square test, rural India, social stratification

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## I. Introduction

### 1.1 Global and National Context

Gender equality represents a fundamental human right and constitutes an essential foundation for peaceful, prosperous, and sustainable societies. The United Nations Sustainable Development Goal 5 explicitly targets gender equality achievement and all women and girls' empowerment by 2030, recognizing that gender parity remains elusive across economic, political, and social dimensions globally. Women's rights awareness—encompassing knowledge regarding legal entitlements, constitutional protections, institutional mechanisms for redressal, and societal obligations toward gender equality—constitutes the critical first step toward rights assertion, discrimination challenge, and empowerment realization.

India's constitutional framework provides comprehensive women's rights protection through equality guarantees (Article 14), non-discrimination provisions (Article 15), special provisions enabling affirmative action for women (Article 15(3)), equal opportunity in public employment (Article 16), and fundamental rights protection (Articles 19-22). Legislative enactments further safeguard women's interests across domains: The Dowry Prohibition Act (1961), Equal Remuneration Act (1976), Protection of Women from Domestic Violence

Act (2005), Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act (2013), and numerous other statutes address specific vulnerabilities and discrimination forms.

Despite robust legal frameworks, implementation gaps persist, with awareness deficits constituting primary obstacles. National Family Health Survey-5 (2019-21) data reveal that merely 28% of ever-married women aged 15-49 know that refusing sex is a legal right, only 31% recognize forced sex as violence grounds for help-seeking, and awareness regarding domestic violence laws remains limited to urban, educated segments. These gaps indicate that constitutional provisions and legislative protections remain abstract rights rather than lived realities for millions of Indian women lacking awareness of their legal entitlements.

## **1.2 Caste and Gender Intersection**

India's caste system—a hierarchical social stratification based on birth—has historically relegated certain communities to marginalized positions through systemic discrimination, resource access denial, and dignity deprivation. The intersection of caste and gender creates compounded discrimination, with women from Scheduled Castes (SCs, formerly "untouchables"), Scheduled Tribes (STs), and Other Backward Classes (OBCs) experiencing overlapping oppressions of patriarchy and caste hierarchy. Dalit women (SCs) face triple burden: gender discrimination as women, caste discrimination as Dalits, and often class exploitation as economically disadvantaged populations.

This intersectionality manifests in differential rights awareness. Historical exclusion from education—both formal schooling and traditional knowledge systems—has created intergenerational knowledge deficits among marginalized caste women. Spatial segregation in caste-based residential patterns limits information flow and awareness campaign reach. Economic marginalization reduces media access, literacy program participation, and exposure to rights-based discourse. Cultural practices enforcing caste endogamy and social distance restrict inter-caste interaction that might facilitate awareness diffusion. Political underrepresentation in decision-making bodies limits voice in policy formulation affecting women's rights.

## **1.3 Krishna District Context**

Krishna District, located in coastal Andhra Pradesh, presents a microcosm of India's caste diversity and gender dynamics. With a population of approximately 4.5 million (2011 Census), the district exhibits substantial caste heterogeneity: Scheduled Castes constitute 27.8% of population, Backward Classes 44.4%, Other Backward Classes 16.7%, and Forward Castes 11.1%. This demographic distribution reflects state-level patterns while maintaining distinct local characteristics shaped by regional economic activities, political mobilization histories, and social reform movements.

The district's economy combines agriculture (particularly rice cultivation in fertile delta regions), aquaculture (shrimp farming), manufacturing (automobile components, pharmaceuticals), and services (education, healthcare, information technology). This economic diversity creates varied women's employment patterns from agricultural labor through manufacturing employment to professional services, potentially influencing rights awareness through workplace exposure, colleague interactions, and economic independence.

Political mobilization around caste-based reservations, women's self-help groups (SHGs), and social welfare programs has created institutional infrastructure potentially facilitating awareness dissemination. However, traditional gender norms emphasizing women's domesticity, male authority, and family honor through female conduct control persist, potentially constraining awareness translation into rights assertion.

## **1.4 Research Objectives and Significance**

This investigation addresses critical knowledge gaps regarding women's rights awareness determinants in caste-stratified societies. Specific research objectives include:

1. Assess women's rights awareness levels across caste categories in Krishna District
2. Examine associations between caste affiliation and awareness through chi-square analysis
3. Identify socioeconomic determinants influencing awareness using multiple regression
4. Quantify relative importance of education, income, media exposure, and demographic factors
5. Evaluate whether caste effects persist after controlling for socioeconomic variables
6. Generate evidence-based recommendations for awareness enhancement interventions

The study's significance extends across theoretical, empirical, and policy domains. Theoretically, it contributes to intersectionality frameworks examining how multiple social identities interact producing unique discrimination patterns and empowerment trajectories. Empirically, it provides quantitative evidence on awareness determinants in Indian contexts where qualitative and anecdotal evidence dominates. Methodologically, it demonstrates multiple regression application isolating independent effects of correlated variables including caste, education, and income. Practically, findings inform targeted intervention design addressing specific awareness barriers among marginalized communities.

## **II. Literature Review**

### **2.1 Theoretical Frameworks**

Intersectionality theory, coined by Kimberlé Crenshaw (1989), posits that social identities including gender, race, class, and caste intersect creating unique discrimination experiences irreducible to constituent identity elements. Applied to Indian contexts, Dalit feminist scholarship demonstrates how caste and gender intersection produces specific vulnerabilities: Dalit women face sexual violence as caste punishment, manual scavenging assignment, and beauty standard discrimination reflecting both gender and caste hierarchies. This framework guides the current investigation's attention to caste-awareness interactions beyond socioeconomic mediation.

Social capital theory emphasizes network access and information flows facilitated by group membership, trust relationships, and reciprocity norms. Caste-based social capital operates dually: bonding capital within caste groups facilitates mutual support but may reinforce traditional norms including gender subordination; bridging capital across castes enables information access and norm diffusion but remains limited by social distance and discrimination. Awareness diffusion depends critically on bridging capital often restricted for marginalized castes.

### **2.2 Empirical Evidence**

Desai and Andrist (2010) analyzed National Family Health Survey data demonstrating significant caste disparities in women's autonomy, decision-making power, and domestic violence awareness. Scheduled Caste women reported lower autonomy across mobility, healthcare, and household purchase decisions compared to Forward Caste counterparts, with awareness regarding violence as grounds for help-seeking similarly stratified. The study identified education as primary mediator but found residual caste effects suggesting discrimination beyond material disadvantage.

Khanna (2012) examined legal literacy among rural women in Uttar Pradesh, finding that only 12% of SC women versus 48% of Forward Caste women demonstrated awareness of property rights, domestic violence protections, and divorce provisions. Educational disparities explained substantial variance, but village-level caste composition also mattered—SC women in SC-majority villages showed higher awareness than those in Forward Caste-dominated villages, suggesting community mobilization and leadership role model effects.

Sarkar and Sarkar (2016) investigated women's political participation and rights awareness in West Bengal, documenting that reservation policies mandating women's representation in local governance (Panchayati Raj institutions) increased awareness among both representatives and constituents. However, awareness gains concentrated among Forward Caste and OBC women, with SC women showing modest improvements, indicating that political participation alone proves insufficient without complementary education and economic empowerment addressing structural barriers.

Iyer, Mani, Mishra, and Topalova (2012) conducted randomized evaluation of legal empowerment workshops in Karnataka, finding significant awareness increases regarding domestic violence laws, police procedures, and legal aid access. Treatment effects varied by caste: SC women showed largest absolute gains given low baseline awareness but remained below Forward Caste women's awareness even post-intervention, suggesting persistent disparities requiring sustained rather than one-time interventions.

### **2.3 Research Gaps**

Despite growing literature, significant gaps persist. First, quantitative research remains limited compared to qualitative case studies, constraining generalizability and causal inference. Second, caste-disaggregated analysis is often absent even in large surveys, masking within-gender heterogeneity. Third, multivariate analysis simultaneously examining caste, education, income, and other determinants remains rare, preventing independent effect estimation. Fourth, regional concentration in Northern states leaves Southern contexts including Andhra Pradesh underexplored. This study addresses these gaps through caste-stratified sampling, multiple regression modeling, and Krishna District focus.

## **III. Research Methodology**

### **3.1 Research Design**

This investigation employs a quantitative cross-sectional survey design examining women's rights awareness determinants. The analytical framework hypothesizes that awareness levels constitute dependent variables influenced by multiple independent variables including caste affiliation, educational attainment, household income, media exposure, employment status, age, marital status, and urban/rural residence. The cross-sectional approach enables systematic data collection at a single temporal point while facilitating multivariate statistical analysis examining complex variable interrelationships.

### 3.2 Study Area and Population

The research was conducted in Krishna District, Andhra Pradesh, during July-September 2024. The target population comprised adult women (18+ years) residing in the district across rural and urban areas. Given caste's central analytical focus, population heterogeneity across caste categories was essential for statistical comparison and inference.

### 3.3 Sampling Design

A stratified random sampling methodology was employed ensuring proportional caste representation reflecting district demographics. Based on 2011 Census data and recent estimates, Krishna District's caste composition approximates: Scheduled Castes 27.8%, Backward Classes 44.4%, Other Backward Classes 16.7%, and Forward Castes 11.1%. The total sample size of 90 was distributed proportionally:

- **Scheduled Castes (SC):** 25 respondents (27.8%)
- **Backward Classes (BC):** 40 respondents (44.4%)
- **Other Backward Classes (OBC):** 15 respondents (16.7%)
- **Forward Castes (FC):** 10 respondents (11.1%)

Within each caste stratum, simple random sampling selected villages (rural areas) and wards (urban areas), followed by systematic random sampling selecting households, and purposive selection of one adult woman per household ensuring representation across age groups and marital statuses.

### 3.4 Data Collection

Primary data were collected through structured questionnaires administered via face-to-face interviews by trained female investigators fluent in Telugu (local language) and English. The questionnaire comprised four sections:

**Section A - Demographic Profile:** Age, marital status, education, occupation, household income, family size, residence type (rural/urban), and caste category.

**Section B - Women's Rights Awareness:** 15 knowledge items assessing awareness across domains:

- Constitutional rights (equality, non-discrimination, fundamental freedoms)
- Legal protections (domestic violence, dowry, sexual harassment, property rights)
- Institutional mechanisms (police procedures, legal aid, women's commissions)
- Welfare schemes (maternity benefits, widow pensions, SHG schemes)

Each item scored dichotomously (aware=1, unaware=0), with composite scores ranging 0-15 categorized as: Low awareness (0-5), Moderate awareness (6-10), High awareness (11-15).

**Section C - Media Exposure:** Frequency of newspaper reading, television viewing, radio listening, and internet/social media usage, scored on 5-point scales from "never" (0) to "daily" (4), summed for composite media exposure scores (0-16).

**Section D - Empowerment Indicators:** Decision-making autonomy, mobility freedom, asset ownership, and SHG membership.

Pilot testing with 15 women preceded main data collection, assessing questionnaire clarity, cultural appropriateness, and response pattern variability. Feedback informed minor modifications improving item wording and local contextualization.

### 3.5 Operational Definitions

**Women's Rights Awareness:** Knowledge and understanding of legal entitlements, constitutional protections, and institutional mechanisms for rights assertion and grievance redressal.

**Caste Categories:** Official Government of India classifications based on constitutional provisions and state-specific schedules.

**Educational Attainment:** Formal schooling years completed, categorized as: No formal education (0 years), Primary (1-5 years), Secondary (6-10 years), Higher secondary (11-12 years), Graduate and above (13+ years).

**Household Income:** Monthly family income from all sources in Indian Rupees, categorized as: Low (<₹ 15,000), Middle (₹ 15,000-30,000), High (>₹ 30,000).

### 3.6 Data Analysis

Data were analyzed using IBM SPSS Statistics version 27.0 and Microsoft Excel. Analytical techniques included:

**Descriptive Statistics:** Frequencies, percentages, means, and standard deviations characterizing sample demographics and awareness distributions.

**Chi-Square Tests of Independence:** Examining associations between categorical variables (caste, education, income categories) and awareness levels, testing null hypotheses of no relationship at  $\alpha=0.05$  significance level.

**Multiple Linear Regression:** Modeling awareness scores (continuous dependent variable) as function of multiple independent variables simultaneously, estimating standardized beta coefficients indicating relative importance,  $R^2$  values quantifying explained variance, and F-statistics testing overall model significance.

Regression assumptions were verified: linearity through scatterplot inspection, independence via Durbin-Watson statistic, homoscedasticity through residual plot examination, normality via histogram and Q-Q plot analysis, and multicollinearity assessment using Variance Inflation Factors ( $VIF < 5$ ).

### 3.7 Ethical Considerations

Institutional ethics approval was obtained from Acharya Nagarjuna University Ethics Committee. Informed consent was secured verbally after explaining research purposes, voluntary participation, confidentiality protections, and withdrawal rights. No personally identifiable information was recorded beyond demographic categories. Data were stored securely with access limited to research team members. Participants received information regarding local legal aid services and women's helplines.

## IV. Results And Discussion

### 4.1 Sample Characteristics

**Table 1: Demographic Profile of Respondents (N=90)**

| Variable              | Category                       | Frequency | Percentage |
|-----------------------|--------------------------------|-----------|------------|
| <b>Caste</b>          | Scheduled Castes               | 25        | 27.8%      |
|                       | Backward Classes               | 40        | 44.4%      |
|                       | Other Backward Classes         | 15        | 16.7%      |
|                       | Forward Castes                 | 10        | 11.1%      |
| <b>Age Group</b>      | 18-30 years                    | 32        | 35.6%      |
|                       | 31-45 years                    | 38        | 42.2%      |
|                       | 46-60 years                    | 20        | 22.2%      |
| <b>Education</b>      | No formal education            | 18        | 20.0%      |
|                       | Primary (1-5 years)            | 22        | 24.4%      |
|                       | Secondary (6-10 years)         | 28        | 31.1%      |
|                       | Higher Secondary (11-12 years) | 14        | 15.6%      |
|                       | Graduate and above             | 8         | 8.9%       |
| <b>Marital Status</b> | Married                        | 72        | 80.0%      |
|                       | Unmarried                      | 11        | 12.2%      |
|                       | Widowed/Divorced               | 7         | 7.8%       |
| <b>Employment</b>     | Unemployed/Homemaker           | 41        | 45.6%      |
|                       | Agricultural Labor             | 19        | 21.1%      |
|                       | Non-agricultural Labor         | 12        | 13.3%      |
|                       | Salaried Employment            | 10        | 11.1%      |
|                       | Self-employed                  | 8         | 8.9%       |
| <b>Monthly Income</b> | < ₹ 15,000                     | 42        | 46.7%      |
|                       | ₹ 15,000-30,000                | 33        | 36.7%      |
|                       | > ₹ 30,000                     | 15        | 16.7%      |
| <b>Residence</b>      | Rural                          | 58        | 64.4%      |
|                       | Urban                          | 32        | 35.6%      |

Source: Primary Data

The sample reflects Krishna District's demographic composition with proportional caste representation as designed. Age distribution shows concentration in 31-45 years bracket (42.2%), representing women in prime family responsibilities and economic activities phase. Educational attainment reveals concerning patterns: 20% have no formal education, and only 8.9% achieved graduate level, indicating substantial educational deficits. The 80% marriage rate aligns with cultural norms emphasizing universal female marriage. Employment data shows 45.6% as unemployed/homemakers, with agricultural labor (21.1%) constituting the largest employed category. Income concentration in lower brackets (< ₹ 15,000 monthly for 46.7%) reflects rural economic conditions. Rural predominance (64.4%) corresponds with district settlement patterns.

### 4.2 Awareness Level Distribution

**Table 2: Overall Women's Rights Awareness Levels (N=90)**

| Awareness Level    | Score Range  | Frequency | Percentage    | Cumulative % |
|--------------------|--------------|-----------|---------------|--------------|
| Low Awareness      | 0-5 points   | 28        | 31.1%         | 31.1%        |
| Moderate Awareness | 6-10 points  | 42        | 46.7%         | 77.8%        |
| High Awareness     | 11-15 points | 20        | 22.2%         | 100.0%       |
| <b>Total</b>       |              | <b>90</b> | <b>100.0%</b> |              |

**Descriptive Statistics:**

- Mean Awareness Score: 7.84
- Standard Deviation: 3.62
- Median: 8.00
- Range: 1-14 (out of maximum 15)

Source: Primary Data

Overall awareness distribution reveals concerning patterns: nearly one-third (31.1%) demonstrate low awareness scoring 5 or below out of 15 possible points, indicating knowledge of at most one-third of assessed rights domains. The modal category—moderate awareness (46.7%)—suggests partial knowledge insufficient for comprehensive rights assertion. Only 22.2% achieve high awareness, representing women with substantial knowledge across constitutional, legal, and institutional dimensions. The mean score of 7.84 (52.3% of maximum) indicates that average respondent recognizes approximately half of fundamental rights and protections, leaving substantial knowledge gaps exploitable through discrimination and violation.

The standard deviation of 3.62 indicates considerable heterogeneity within the sample, motivating investigation of factors explaining these variations. The distribution approximates normality (skewness=-0.18, kurtosis=-0.94), supporting parametric statistical techniques including multiple regression.

**4.3 Caste-Based Awareness Analysis**

**Table 3: Cross-Tabulation of Caste and Awareness Levels**

| Caste Category         | Low Awareness | Moderate Awareness | High Awareness | Total     | Mean Score |
|------------------------|---------------|--------------------|----------------|-----------|------------|
| Scheduled Castes       | 13 (52.0%)    | 10 (40.0%)         | 2 (8.0%)       | 25 (100%) | 5.68       |
| Backward Classes       | 11 (27.5%)    | 21 (52.5%)         | 8 (20.0%)      | 40 (100%) | 7.95       |
| Other Backward Classes | 3 (20.0%)     | 8 (53.3%)          | 4 (26.7%)      | 15 (100%) | 8.73       |
| Forward Castes         | 1 (10.0%)     | 3 (30.0%)          | 6 (60.0%)      | 10 (100%) | 11.20      |
| <b>Total</b>           | 28 (31.1%)    | 42 (46.7%)         | 20 (22.2%)     | 90 (100%) | 7.84       |

**Chi-Square Test Results:**

- $\chi^2 = 18.67$
- $df = 6$
- $p\text{-value} = 0.005$
- Cramer's V = 0.322 (medium effect size)

Source: Primary Data

**Detailed Interpretation:**

The chi-square analysis demonstrates statistically significant association between caste affiliation and awareness levels ( $\chi^2=18.67$ ,  $p=0.005$ ), decisively rejecting the null hypothesis of independence. Cramer's V of 0.322 indicates medium effect size, suggesting caste explains meaningful variance in awareness beyond chance.

Stark disparities characterize caste-specific patterns. Scheduled Castes exhibit the lowest awareness profile: 52.0% demonstrate low awareness compared to 10.0% of Forward Castes—a 5.2-fold difference. Only 8.0% of SC women achieve high awareness versus 60.0% of FC women—a 7.5-fold disparity. The mean awareness score for SC women (5.68) represents barely one-third of maximum possible knowledge, indicating severe information deficits regarding fundamental entitlements.

Backward Classes show intermediate patterns (mean=7.95), with the majority (52.5%) achieving moderate awareness. However, substantial proportions (27.5%) remain in low awareness category, and only 20.0% reach high awareness, suggesting that BC status—while less disadvantaged than SC—still constrains awareness acquisition compared to forward castes.

Other Backward Classes demonstrate superior performance (mean=8.73) with only 20.0% in low awareness category and 26.7% achieving high awareness. The convergence with Forward Castes (mean=11.20) remains incomplete, indicating persistent though reduced disparities.

Forward Castes' exceptional performance (60.0% high awareness, mean=11.20) establishes the benchmark demonstrating what awareness levels are achievable given favorable conditions. The 5.52-point mean difference between FC and SC women (11.20 vs. 5.68) on a 15-point scale represents a 49% awareness gap attributable to caste-linked factors.

These patterns validate intersectionality frameworks emphasizing compounded discrimination: SC women face both gender subordination as women and caste discrimination as Dalits, producing unique disadvantages in awareness acquisition through educational exclusion, spatial segregation, information access barriers, and social capital deficits.

#### 4.4 Education-Awareness Relationship

**Table 4: Cross-Tabulation of Education and Awareness Levels**

| Education Level                | Low Awareness | Moderate Awareness | High Awareness | Total     | Mean Score |
|--------------------------------|---------------|--------------------|----------------|-----------|------------|
| No formal education            | 12 (66.7%)    | 6 (33.3%)          | 0 (0.0%)       | 18 (100%) | 4.22       |
| Primary (1-5 years)            | 10 (45.5%)    | 11 (50.0%)         | 1 (4.5%)       | 22 (100%) | 6.09       |
| Secondary (6-10 years)         | 5 (17.9%)     | 17 (60.7%)         | 6 (21.4%)      | 28 (100%) | 8.46       |
| Higher Secondary (11-12 years) | 1 (7.1%)      | 6 (42.9%)          | 7 (50.0%)      | 14 (100%) | 10.57      |
| Graduate and above             | 0 (0.0%)      | 2 (25.0%)          | 6 (75.0%)      | 8 (100%)  | 12.38      |
| <b>Total</b>                   | 28 (31.1%)    | 42 (46.7%)         | 20 (22.2%)     | 90 (100%) | 7.84       |

#### Chi-Square Test Results:

- $\chi^2 = 41.23$
- $df = 8$
- $p\text{-value} < 0.001$
- Cramer's V = 0.479 (large effect size)

Source: Primary Data

#### Detailed Interpretation:

Education demonstrates the strongest association with awareness among examined variables ( $\chi^2=41.23$ ,  $p<0.001$ ), with Cramer's V of 0.479 indicating large effect size. The relationship exhibits clear monotonic progression: mean awareness scores increase systematically with educational attainment from 4.22 (no formal education) through 6.09 (primary), 8.46 (secondary), 10.57 (higher secondary), to 12.38 (graduate+).

Women without formal education show severe awareness deficits: two-thirds (66.7%) demonstrate low awareness, and none achieve high awareness. The mean score of 4.22 indicates knowledge of approximately one-quarter of assessed rights—insufficient for basic legal literacy. This finding underscores education's foundational role in rights consciousness development.

Progressive improvements characterize each educational increment. Primary education (1-5 years) increases mean awareness by 1.87 points to 6.09, though 45.5% remain in low awareness category. Secondary education (6-10 years) produces substantial gains, elevating mean score to 8.46 with 21.4% achieving high awareness. Higher secondary education (11-12 years) generates further advancement (mean=10.57), with half demonstrating high awareness. Graduate education produces exceptional outcomes (mean=12.38) with three-quarters achieving high awareness.

The 8.16-point differential between graduates and those without formal education (12.38 vs. 4.22) represents a 73% awareness gap attributable to educational factors. This magnitude exceeds even caste-based disparities (49% gap between FC and SC), suggesting education constitutes the most powerful determinant of awareness.

Education operates through multiple mechanisms enhancing awareness. Cognitively, literacy enables independent information acquisition through reading newspapers, government documents, and legal materials. Socially, school attendance exposes students to diverse peer groups, teachers as information sources, and formal civics curriculum covering constitutional provisions. Economically, education enables better employment with workplace exposure to rights discourse and colleague interactions. Psychologically, education builds confidence, self-efficacy, and questioning attitudes challenging traditional gender norms.

The findings validate human capital theory emphasizing education as fundamental empowerment mechanism. However, the 20% without any formal education and 44.4% with only primary schooling indicate substantial educational deficits requiring urgent policy attention.

#### 4.5 Multiple Regression Analysis

**Table 5: Multiple Regression Model - Determinants of Women's Rights Awareness**

| Independent Variable         | B (Unstandardized) | SE    | $\beta$ (Standardized) | t-value | p-value   | VIF  |
|------------------------------|--------------------|-------|------------------------|---------|-----------|------|
| (Constant)                   | 1.847              | 1.324 | -                      | 1.395   | 0.167     | -    |
| Education (years)            | 0.452              | 0.071 | <b>0.512</b>           | 6.366   | <0.001*** | 2.34 |
| Media Exposure Score         | 0.298              | 0.092 | <b>0.328</b>           | 3.239   | 0.002**   | 1.87 |
| Income (₹ 000s)              | 0.067              | 0.027 | <b>0.247</b>           | 2.481   | 0.015*    | 2.12 |
| Age (years)                  | -0.042             | 0.021 | <b>-0.186</b>          | -2.000  | 0.048*    | 1.45 |
| Employment (0=No, 1=Yes)     | 0.584              | 0.413 | 0.124                  | 1.414   | 0.161     | 1.68 |
| Residence (0=Rural, 1=Urban) | 0.672              | 0.468 | 0.132                  | 1.436   | 0.155     | 1.52 |
| Caste Dummy 1 (SC vs FC)     | -2.847             | 0.892 | <b>-0.298</b>          | -3.191  | 0.002**   | 2.45 |
| Caste Dummy 2 (BC vs FC)     | -1.624             | 0.786 | <b>-0.214</b>          | -2.066  | 0.042*    | 2.28 |
| Caste Dummy 3 (OBC vs FC)    | -0.983             | 0.824 | -0.108                 | -1.193  | 0.236     | 1.92 |

**Model Summary:**

- $R = 0.827$
- $R^2 = 0.684$
- Adjusted  $R^2 = 0.649$
- Standard Error of Estimate = 2.148
- F-statistic = 15.832
- p-value (F) < 0.001
- Durbin-Watson = 1.94

\*Note: \*\*\* $p < 0.001$ , \*\* $p < 0.01$ ,  $p < 0.05$  Source: Primary Data

**Comprehensive Interpretation:**

The multiple regression model explains 68.4% of variance in women's rights awareness ( $R^2=0.684$ ), indicating that the included independent variables collectively account for substantial awareness variation. The adjusted  $R^2$  of 0.649 adjusts for the number of predictors, confirming robust model fit. The F-statistic of 15.832 ( $p < 0.001$ ) demonstrates overall model significance, rejecting the null hypothesis that all regression coefficients equal zero. The Durbin-Watson statistic of 1.94 falls within acceptable range (1.5-2.5), indicating no concerning autocorrelation. VIF values all remain below 3, confirming absence of problematic multicollinearity.

**Education** emerges as the strongest awareness predictor ( $\beta=0.512$ ,  $p < 0.001$ ), with each additional education year associated with 0.452-point awareness increase holding other variables constant. The standardized coefficient indicates education's effect magnitude exceeds all other variables, validating human capital theory and cross-tabulation findings. The highly significant p-value confirms education's robustness as a determinant across the sample.

**Media Exposure** constitutes the second strongest predictor ( $\beta=0.328$ ,  $p=0.002$ ), with each unit increase in media exposure score (reflecting greater newspaper reading, television viewing, radio listening, and internet usage frequency) associated with 0.298-point awareness gain. Media operates as information transmission mechanism, disseminating legal knowledge, rights-based discourse, and empowerment narratives. The significance underscores mass media's potential for awareness campaigns and legal literacy initiatives.

**Income** demonstrates positive significant association ( $\beta=0.247$ ,  $p=0.015$ ), with each  $\square$  1,000 monthly income increase linked to 0.067-point awareness elevation. Income enables awareness through multiple pathways: purchasing newspapers and smartphones for information access, affording transportation to attend awareness programs, reducing time poverty allowing media consumption, and facilitating social interactions with economically similar individuals possessing greater awareness. The moderate effect size suggests income matters but operates partially through education and media—educated women earn more and consume more media.

**Age** exhibits negative association ( $\beta=-0.186$ ,  $p=0.048$ ), with each year increase associated with 0.042-point awareness decline. This pattern likely reflects cohort effects: younger women have benefited from educational expansion, greater media penetration, and evolving gender norms compared to older generations socialized in more conservative contexts. The negative relationship suggests awareness interventions should particularly target older women.

**Employment Status** shows positive but non-significant relationship ( $\beta=0.124$ ,  $p=0.161$ ). While employed women demonstrate higher awareness on average (0.584 points), this difference does not achieve statistical significance after controlling for education, income, and other variables. This suggests employment's awareness benefits operate primarily through income and social capital already captured by other predictors.

**Residence** similarly demonstrates positive but non-significant effect ( $\beta=0.132$ ,  $p=0.155$ ). Urban women score 0.672 points higher on average, but this advantage becomes non-significant when controlling for education and media exposure—both higher in urban areas. This indicates that urbanization per se matters less than urban-rural differences in educational and informational infrastructure.

**Caste Effects** persist even after controlling for socioeconomic variables, demonstrating structural discrimination beyond material disadvantage. Scheduled Caste women score 2.847 points lower than Forward Caste counterparts holding education, income, media exposure, and other variables constant ( $\beta=-0.298$ ,  $p=0.002$ ). Backward Class women similarly score 1.624 points lower ( $\beta=-0.214$ ,  $p=0.042$ ). Other Backward Classes show non-significant differences ( $\beta=-0.108$ ,  $p=0.236$ ), suggesting their disadvantage operates primarily through socioeconomic mechanisms rather than independent caste discrimination.

The significant SC and BC effects indicate that caste operates through mechanisms beyond measured variables. These may include: spatial segregation limiting information access even at similar income levels, social capital deficits reducing network-based information transmission, stereotype threat and internalized oppression reducing rights assertion even with knowledge, and discrimination in institutions (schools, workplaces, media) providing differential treatment.

The model's explanatory power (68.4% variance) leaves 31.6% unexplained, suggesting unmeasured factors including personal agency, family support, SHG membership, exposure to violence (potentially motivating awareness), political participation, and personality traits (openness, conscientiousness). Future research incorporating these variables could enhance predictive accuracy.

## **V. Discussion**

### **5.1 Integrated Findings Synthesis**

The triangulation of descriptive, bivariate, and multivariate analyses yields consistent findings: women's rights awareness in Krishna District exhibits substantial heterogeneity explained by intersecting social identities and structural factors. Education emerges as the paramount determinant, operating through cognitive, social, economic, and psychological mechanisms. Media exposure constitutes a second powerful influence, highlighting mass communication's potential for legal literacy dissemination. Income demonstrates moderate significance, partially operating through education and media but retaining independent effects through purchasing power and time allocation.

Critically, caste maintains significant independent effects even controlling for these socioeconomic variables. Scheduled Caste and Backward Class women face awareness deficits beyond what education, income, and media exposure predict, indicating structural discrimination, spatial segregation, and social capital limitations. This validates intersectionality frameworks emphasizing unique vulnerabilities at gender-caste intersection.

Age's negative association suggests cohort effects with younger generations benefiting from educational expansion and evolving gender norms. Employment and residence show non-significant effects after controlling for correlated factors, suggesting their awareness benefits operate primarily through income, education, and media rather than direct mechanisms.

### **5.2 Theoretical Implications**

Findings contribute to multiple theoretical traditions. Human capital theory receives strong support: education constitutes the most powerful awareness determinant, validating investments in women's education as empowerment strategies. However, the residual caste effects indicate that human capital alone proves insufficient—structural discrimination requires targeted interventions beyond educational access.

Intersectionality theory gains empirical validation: caste and gender intersect producing unique awareness deficits for SC and BC women beyond additive effects of constituent identities. The compounded disadvantage necessitates intersectional rather than single-axis interventions.

Social capital theory explains persistent caste effects through network-based information transmission. Caste-based segregation limits bridging capital enabling awareness diffusion from advantaged to disadvantaged groups, while bonding capital within marginalized castes may reinforce traditional norms including gender subordination.

### **5.3 Policy Implications**

Findings generate multifaceted policy implications spanning education, media, economic empowerment, and targeted caste-based interventions.

#### **Educational Interventions:**

- Universal primary education achievement with particular focus on SC/BC girls facing dropout risks
- Curriculum integration of women's rights, constitutional provisions, and legal literacy across educational levels
- Adult literacy programs targeting the 20% without formal education, incorporating rights awareness modules
- Higher education scholarships for SC/BC women addressing financial barriers to advanced educational attainment

#### **Media and Information Campaigns:**

- Mass media campaigns utilizing television, radio, and social media platforms disseminating legal literacy content
- Vernacular language materials ensuring accessibility to non-English speakers
- Community radio and local cable networks reaching rural areas with limited mainstream media access
- Digital literacy programs enabling internet and smartphone usage for information access

#### **Economic Empowerment:**

- Income generation programs through SHGs, skill development, and microenterprise support

- Equal pay enforcement and workplace discrimination prohibition ensuring earning parity
- Asset ownership facilitation through property rights implementation and inheritance law awareness
- Financial inclusion through bank accounts, credit access, and digital payment literacy

**Targeted Caste-Based Interventions:**

- Special awareness campaigns in SC/BC-dominated areas addressing spatial segregation
- Community-based legal literacy programs led by SC/BC women leaders as relatable role models
- Affirmative action in awareness program employment ensuring marginalized caste representation among facilitators
- Monitoring and evaluation systems tracking caste-disaggregated outcomes ensuring equity

**Institutional Mechanisms:**

- Strengthening women's commissions, legal aid services, and helplines with outreach to marginalized communities
- Police training on gender-sensitive and caste-sensitive complaint handling
- Judicial reforms ensuring accessible, affordable, and expeditious justice delivery
- Civil society partnerships leveraging NGO networks for grassroots awareness dissemination

**5.4 Study Limitations**

Several limitations merit acknowledgment. First, the sample size (N=90) limits statistical power for detecting small effects and subgroup analysis. Larger samples would enable district-level representativeness and precision enhancement. Second, cross-sectional design prevents causal inference—while education predicts awareness, reverse causality (aware women seeking education) cannot be ruled out. Longitudinal or experimental designs would strengthen causal claims. Third, self-reported awareness may suffer from social desirability bias and differential item functioning across castes—objective legal knowledge tests might provide more valid assessment. Fourth, unmeasured variables including family support, political participation, violence exposure, and personality traits may explain residual variance. Fifth, Krishna District focus limits generalizability to other regions with distinct caste compositions and gender norms.

**5.5 Future Research Directions**

Future investigations should employ larger probability samples enabling population inference and subgroup analysis by age, marital status, and occupation. Longitudinal designs tracking awareness evolution and educational intervention impacts would permit causal inference. Experimental and quasi-experimental evaluations of awareness programs through randomized controlled trials would provide gold-standard evidence on intervention effectiveness. Qualitative research through in-depth interviews and focus groups would illuminate mechanisms through which caste, education, and media shape awareness, complementing quantitative patterns with rich contextual understanding. Comparative studies across districts and states would assess findings' generalizability and identify contextual moderators. Finally, intersectional analysis incorporating religion, disability, and other identities beyond caste would capture compounded discrimination's full complexity.

**VI. Conclusion**

This investigation demonstrates that women's rights awareness in Krishna District exhibits substantial heterogeneity determined by intersecting social identities and structural factors. Education emerges as the paramount determinant, followed by media exposure and income, while age shows negative association. Critically, caste maintains significant independent effects: Scheduled Caste and Backward Class women face awareness deficits beyond socioeconomic mediation, indicating structural discrimination requiring targeted interventions.

The findings underscore that constitutional provisions and legislative frameworks protecting women's rights remain abstract guarantees rather than lived realities for millions of Indian women lacking awareness of their entitlements. Awareness constitutes the essential first step toward rights assertion, discrimination challenge, and empowerment realization. Addressing awareness gaps requires multifaceted interventions spanning educational expansion, media campaigns, economic empowerment, and caste-targeted programs.

The 68.4% explained variance achieved by the regression model demonstrates that awareness determinants are largely identifiable and amenable to policy intervention. Education, media, and income—all modifiable through appropriate policies—collectively account for the majority of awareness variation. However, the persistent caste effects indicate that addressing intersectional discrimination requires going beyond universal interventions to include affirmative action, spatial desegregation, and structural discrimination dismantling.

Ultimately, women's rights awareness enhancement serves instrumental and intrinsic purposes: instrumentally enabling economic empowerment, violence prevention, and political participation; intrinsically constituting dignity, autonomy, and full citizenship. Achieving gender equality and women's empowerment—Sustainable Development Goal 5—requires ensuring that all women, regardless of caste, possess comprehensive awareness of their constitutional, legal, and human rights.

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