

## Bridging Health Interventions and Empowerment: An Analysis of Women Beneficiaries of Health and Maternity Schemes in Goa

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### Abstract

*Empowerment of women is considered important for building a knowledge-driven society, as it significantly contributes to the well-being of individual families and has a positive impact on society and the nation at large. The study explores the effect of health and maternity schemes on the social empowerment of women beneficiaries in the State of Goa. It assesses how the government initiatives bring about positive changes in the decision-making, personal independence, social status and security of women beneficiaries. An empirical approach was adopted and a sample size of 300 women beneficiaries was considered using the stratified and snowball sampling methods. Partial Least Squares-Structural Equation Modelling (PLS-SEM) using Smart PLS 4 were adopted for data analysis to identify the relationship between health schemes and social empowerment leading to overall women empowerment. The findings highlight that women beneficiaries have improved health outcomes along with greater confidence, autonomy and recognition in society, especially the marginalised. The need for continued strategy support and targeted outreach to maximise the empowering potential of health schemes among women, to bring about inclusive development, growth and gender parity in regional contexts is emphasised in the study.*

**Keywords:** Decision-Making, Health and Maternity Schemes, Social Empowerment, Social Status and Security, Women Empowerment.

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### 1. Introduction

Government health schemes serve as critical mechanisms for advancing women's social empowerment through multidimensional interventions that integrate healthcare provision with strategies targeting economic security and social well-being. Sharaunga et al., (2019) conceptualised empowerment as the interplay of agency and resource access and it underpins global initiatives to enhance women's autonomy over health and life decisions, while bolstering their capacity for informed

decision-making and quality-of-life improvements (Sen et al., 2021; Reich, 2024). National development depends on women's active participation, yet for marginalised groups constrained by illiteracy, poverty and patriarchal norms, this remains a gradual process requiring sustained societal and institutional support to secure rights and equity (Nazneen et al., 2019; Kabeer, 2005).

In Goa, health and maternity schemes; namely the Mamta Scheme (MS), Pradhan Mantri Matru Vandana Yojana (PMMVY) and Janani Suraksha

Yojana (JSY) act as pivotal catalysts by delivering essential services such as nutritional support, institutional deliveries, antenatal care, postnatal care and financial incentives, thereby reducing maternal and infant mortality while fostering awareness, confidence and participation in family and community affairs (Azuh et al., 2017; Kumar & Singh, 2016; Gupta & Joe, 2021). These programs alleviate economic vulnerability, elevate social status within patriarchal structures and enhance decision-making prowess among beneficiaries (Rao et al., 2013).

## 2. Literature Review and Hypotheses Formulation

### 2.1 Literature Review

Social empowerment entails the process by which individuals, particularly women in developing economies like India, gain agency in decision-making, secure access to and control over resources and participate meaningfully in social, economic and political spheres. This concept is intrinsically linked to health and maternity services, where health serves not merely as the absence of disease but as a foundational enabler of productive, autonomous lives (Kabeer, 1999). Government schemes such as JSY provide financial incentives and institutional support to pregnant and lactating women, alleviating childbirth-related economic burdens while enhancing healthcare access (Ngamasana & Moxie, 2024). Empirical evidence underscores their role in advancing women's empowerment through collaborative governance, alongside education, health and employment as critical determinants that elevate socio-economic status and economic contributions (Powell et al., 2009; Sarkar & Sensarma, 2024;

Palaniappan & Aniyam, 2010; Gonzalo et al., 2017).

Health-oriented interventions further catalyse social empowerment by facilitating women's engagement in education, skill development and local governance, though their effectiveness varies by regional implementation, beneficiary awareness and socio-cultural barriers (Chattopadhyay & Mishra, 2017; Kavitha & Menon, 2025). While these schemes lay a robust foundation for transformation, their impact intensifies when paired with awareness campaigns and community mobilisation. Literature affirms the dual role of health schemes in improving physical well-being and driving broader social change; however, this study addresses a notable research gap that persists in empirical analyses of government health and maternity schemes' implementation and outcomes in Goa.

Identifying this research gap, the main research questions (RQs) arrived at were:

**RQ1:** Do the health and maternity schemes implemented in the State of Goa help the women beneficiaries to become socially empowered?

**RQ2:** Does social empowerment lead to women empowerment in Goa?

To address the research questions, the objectives of the study were framed as follows:

1. To assess the impact of health and maternity schemes on the social empowerment of women beneficiaries in Goa.
2. To assess the impact of social empowerment on women empowerment.

## 2.2 Hypotheses Formulation

Based on this background, the hypotheses have been formulated as under:

### 2.2.1 Health and Maternity Schemes -> Social Empowerment

Health and maternity schemes play a pivotal role in fostering social empowerment among women by addressing vital health needs, bringing down maternal mortality and also increasing access to quality health care. The schemes also promote their participation in household and community decision-making by reducing health-related vulnerabilities. Access to institutional deliveries, antenatal and postnatal care and financial incentives through schemes like the JSY and PMMVY empowers women socially by building their confidence and autonomy (Kumar & Prakash, 2021).

The hypothesis proposed is as under:

- **H<sub>1</sub>**: There exists an impact of health and maternity schemes on the social empowerment of women beneficiaries.

### 2.2.2 Social Empowerment->Women Empowerment:

Social empowerment boosts women's agency, voice and decision-making through access to education, healthcare, networks and participatory platforms. It transforms identities, fosters self-efficacy and autonomy, challenges gender hierarchies and enables participation in economic, political and familial spheres (Kabeer, 1999).

Thus, the proposed hypothesis is as under:

- **H<sub>2</sub>**: There exists an impact of social empowerment on women empowerment.

## 3. Dimensions of Social Empowerment

Social empowerment is the second-order construct in the model of the study and it is measured with the help of three constructs, namely: decision making, personal independence, social status and security.

### 3.1 Decision Making

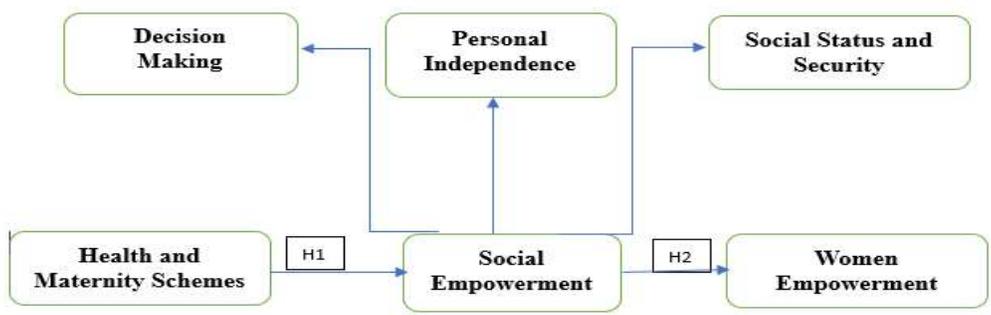
Women's participation in household decisions on healthcare, major expenditures and mobility indicates autonomy and influence (Jejeebhoy, 2000). Maternal health interventions strengthen agency in family planning, child education and nutrition (Chattopadhyay & Mishra, 2017), while schemes like PMMVY advance financial inclusion via direct transfers, increasing control over resources (Gupta & Joe, 2021).

### 3.2 Personal Independence

Health and maternity schemes boost women's mobility and public participation. Engaging with health centres reduces isolation, builds confidence and extends involvement to community programs and governance, promoting social inclusion and independence (Kumar & Singh, 2016).

### 3.3 Social Status and Security

Social empowerment elevates women's status and security via participation in societal structures, rights access and community recognition. It challenges discriminatory norms, fosters self-efficacy and ensures equitable roles in family and public spheres through education, healthcare and support systems. This reduces vulnerability, boosts dignity, curbs gender violence and enhances social safety nets (Desai & Thakkar, 2007).



**Figure 1: Conceptual Model**

Source: Author's Compilation

**4. Research Methodology**

**4.1 Sample Design**

This study adopts an empirical survey design for data collection. The sample consists of 300 women beneficiaries from three targeted schemes PMMVY, JSY and MS selected through purposive sampling supplemented by snowball techniques to ensure adequate representation of eligible participants.

**4.2 Questionnaire Design**

A structured questionnaire was personally administered to 320 beneficiaries. Out of 320, 300 yielded usable responses with a response rate of 93.75 percent. Comprising 22 items across four constructs; Decision Making, Personal Independence and Social Status and Security and Women Empowerment, the instrument

measured social empowerment (dependent variable) and its impact on women empowerment. Adapted from validated scales, it employed a 5-point Likert scale (1=strongly disagree; 5=strongly agree).

**5. Analysis and Results**

Table 1 provides detailed information about the demographic characteristics of the respondents. It was observed that 40 percent of the beneficiaries were from North Goa and 60 percent of them were from the South District. Majority of the women beneficiaries belonged to the age group of 25-40 years (44 percent) and 55 percent of them lived areas under the jurisdiction of Municipality. 45 percent of the beneficiaries had an annual income of less than Rs. 3,00,000.

**Table 1: Demographic Characteristics of Women Beneficiaries (n=300)**

Variable	Classification	Frequency	Percentage
District	North	120	40.00
	South	180	60.00
Age Group	Below 25 years	110	36.67
	25-40 years	132	44.00
	40 years and above	58	19.33
Residential Area	Municipality	165	55.00
	Panchayat	135	45.00
Annual Income	Less than 3,00,000	135	45.00
	3,00,000-5,00,000	87	29.00
	5,00,000 and above	78	26.00

Source: Primary Data

**5.1 Measurement Model**

PLS-SEM using Smart PLS4 was adopted for analysis of the data. PLS-SEM is largely employed in management research due to its capability of generating reliable results. The outer model was first confirmed for its

discriminant and convergent validity, followed by evaluation of the hypotheses using the inner model. Table 2 shows the construct reliability and validity of the measurement model, assessed with CA, CR and AVE, which were found to be acceptable.

**Table 2: Construct Validity and Reliability**

Constructs	Variable Code	Factor Loading	Variation Inflation Factor (VIF)	Cronbach's Alpha (CA)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Social Empowerment	SE			0.921	0.930	0.404
Decision Making (DM)	DM1	0.842	2.832	0.927	0.943	0.733
	DM2	0.833	2.878			
	DM3	0.859	3.217			
	DM4	0.863	3.698			
	DM5	0.879	3.700			
Personal Independence (PI)	DM6	0.859	3.319	0.907	0.931	0.731
	PI1	0.776	2.090			
	PI2	0.869	3.319			
	PI3	0.884	3.440			
	PI4	0.880	3.646			
Social Status and Security (SSS)	PI5	0.861	2.838	0.905	0.925	0.638
	SSS1	0.781	2.105			
	SSS2	0.779	2.191			
	SSS3	0.815	2.457			
	SSS4	0.814	2.451			
	SSS5	0.846	2.716			
	SSS6	0.774	2.303			
Women Empowerment (WE)	SSS7	0.780	2.179	0.886	0.923	0.750
	WE1	0.757	1.533			
	WE2	0.891	3.082			
	WE3	0.897	3.138			
	WE4	0.908	3.497			

Source: Primary Data

All the values exceeded the recommended threshold of 0.70, indicating strong internal consistency among the items of each construct (Hair

et. al., 2016). Additionally, all the outer loadings are above 0.70, strengthening the indicator's reliability. The VIF values for all the indicators are below the

threshold of 5, which confirms the absence of multicollinearity. The VIF values for all the indicators are below

the threshold of 5, which confirms the absence of multicollinearity.

**Table 3: Fornell-Larcker Criterion (Discriminant Validity)**

	<b>Decision Making</b>	<b>Personal Independence</b>	<b>Social Status and Security</b>	<b>Women Empowerment</b>
Decision Making	0.856			
Personal Independence	0.296	0.654		
Social Status and Security	0.557	0.352	0.799	
Women Empowerment	0.276	0.561	0.331	0.866

Source: Primary Data

Table 3 shows the Fornell-Larcker criterion that assesses the discriminant validity among the constructs through the comparison of square root of the Average Variance Extracted (AVE) for each construct with the correlations of the constructs. It is seen in the table that all the diagonal values of Decision-Making (0.856), Personal Independence (0.654), Social

Status and Security (0.799) and Women Empowerment (0.866) are higher than their corresponding inter-construct correlations. This is an indicator that each construct shares more variance with its own indicators than with the other constructs, which confirms the acceptable discriminant validity in the measurement model.

**Table 4: Heterotrait-Monotrait (HTMT) Matrix**

	<b>Decision Making</b>	<b>Personal Independence</b>	<b>Social Status and Security</b>	<b>Women Empowerment</b>
Decision Making				
Personal Independence	0.320			
Social Status and Security	0.606	0.386		
Women Empowerment	0.303	0.651	0.368	

Source: Primary Data

Table 4 shows the HTMT Ratio, which was calculated to assess the discriminant validity of the constructs, considering it to be a more stringent and reliable measure compared to traditional criteria such as the Fornell-

Larcker criterion. The construct pairs displayed the HTMT ratio below the threshold limit of 0.85, which shows that constructs are empirically different from each other, indicating a good discriminant validity (Henseler et al.,2015).

**Table 5: Cross Loadings/Outer Loadings**

	<b>Decision Making</b>	<b>Personal Independence</b>	<b>Social Status and Security</b>	<b>Women Empowerment</b>
DM1	0.842	0.253	0.52	0.23
DM2	0.833	0.251	0.466	0.23
DM3	0.859	0.194	0.484	0.168
DM4	0.863	0.277	0.453	0.266
DM5	0.879	0.276	0.465	0.264
DM6	0.859	0.266	0.471	0.255
PI1	0.286	0.776	0.274	0.654
PI2	0.181	0.869	0.28	0.597
PI3	0.228	0.884	0.269	0.501
PI4	0.257	0.88	0.319	0.498
PI5	0.304	0.861	0.355	0.666
SSS1	0.429	0.265	0.781	0.252
SSS2	0.386	0.259	0.779	0.239
SSS3	0.466	0.278	0.815	0.257
SSS4	0.472	0.261	0.814	0.245
SSS5	0.447	0.285	0.846	0.273
SSS6	0.482	0.351	0.774	0.326
SSS7	0.424	0.266	0.78	0.255
WE1	0.286	0.304	0.274	0.757
WE2	0.181	0.408	0.28	0.891
WE3	0.228	0.452	0.269	0.897
WE4	0.257	0.345	0.319	0.908

*Source: Primary Data*

Table 5 shows the cross loadings among the constructs, which provides evidence of discriminant validity, a key criterion in estimating the outer measurement model in PLS-SEM. Each indicator should load highest on its associated latent construct compared to others and in the table, it is evident that all items measuring Decision-Making (DM1-DM6) have high loadings on the Decision-Making construct (ranging from 0.833 to 0.879) and considerably lower loadings on other constructs, confirming their strong association with their intended latent variable. Similarly, the items for Personal Independence (PI1-PI5) load highest on their own construct (0.776 to 0.884), the same is

applicable to the construct of Social Status and Security (SSS1-SSS7) with loadings between 0.774 and 0.846 and Women Empowerment items (WE1-WE4) with loadings from 0.757 to 0.908. Overall, the indicators show stronger associations with their respective constructs than with others, supporting the construct validity of the measurement model.

The hypothesis confirming a significant relationship between social empowerment and women's empowerment is substantiated, establishing social empowerment as a key driver through decision-making, personal independence, social status and security.

5.2 Structural Model

Table 6: Hypothesis Testing

	Path Coefficient ( $\beta$ )	t-value	p-value	Result
Health and Maternity Schemes -> Social Empowerment	0.311	6.680	0.000	Supported
Social Empowerment -> Women Empowerment	0.654	16.459	0.000	Supported

Source: Primary Data

This validates empowerment's embeddedness in social dynamics; mobility, community acceptance and gender parity beyond economic realms (Sabarwal et al., 2013; Ahuru, 2019). Socially empowered women secure equitable treatment, social protection, legal and community support, resonating with literature on

recognition's centrality (Sen, 1997; Narayan, 2005). Results demonstrate enhanced autonomy, mobility, expression and employment agency via robust social networks and respect (Kabeer, 1999), positioning social empowerment as equally vital to economic factors for gender equality.

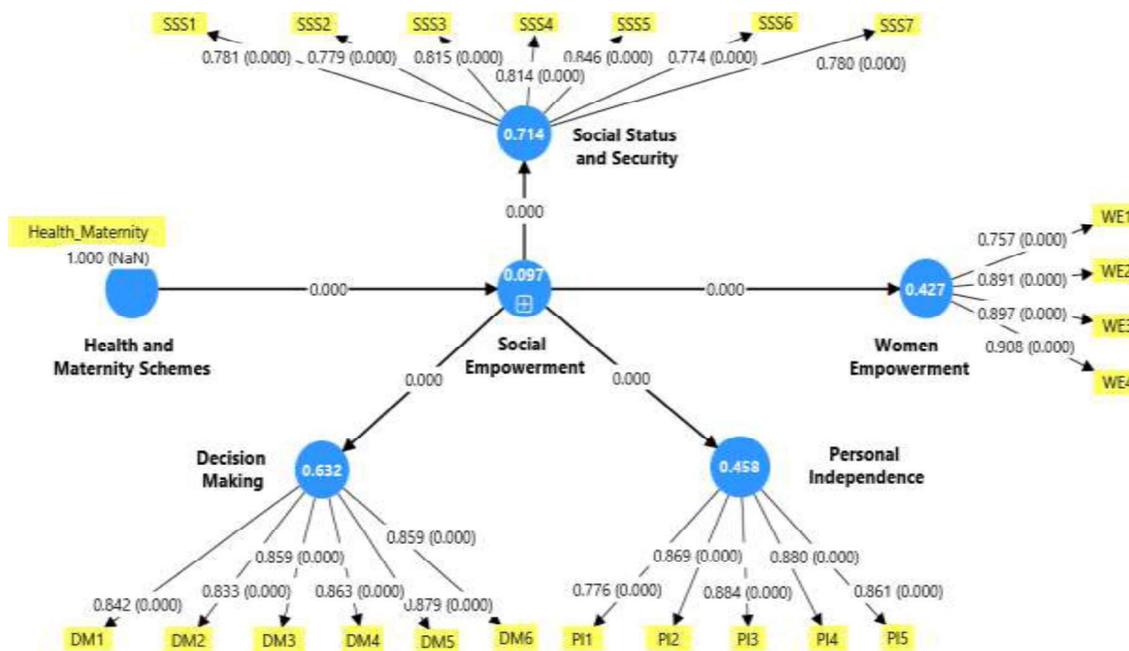


Figure 2: PLS-SEM Analysis

6. Conclusion

This study highlights health and maternity schemes' role in fostering social empowerment among women beneficiaries in Goa. Empirical evidence shows these initiatives meet healthcare needs while boosting the key

empowerment dimensions of self-efficacy, decision-making, independence, social status and security (Kumar & Gupta, 2020; Karim et al., 2014). They dismantle barriers, enabling participation in family and society, aligning with Kabeer's (1999)

framework of empowerment via decision and resource control. Empowered women gain autonomy in family, financial and personal domains, with decision-making as a core indicator (Coley et al., 2021).

Interventions should prioritise awareness, accessibility and community engagement (Bajpai et al., 2019), affirming women's identities through participation (Dutt & Samanta, 2002). Policies recommend sustained maternal healthcare investment for pregnancy, delivery and postnatal care to promote institutional deliveries and overall empowerment of women beneficiaries.

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