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Invisible Health Expenditure Among Differently Abled Families in Kerala: A Comprehensive Analysis of Hidden Costs and Policy Gaps.

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Abstract

This study examines the invisible health expenditure burden faced by differently abled families in Kerala, India (Kurian & Sebastian, 2021). While traditional healthcare cost analyses focus on direct medical expenses, this research reveals significant hidden costs including transportation, assistive device maintenance, caregiver burden, and mental health impacts (George, 2018). Through mixed-method research involving 25 households across Thrissur and Kasaragod districts, the study identifies substantial policy gaps in addressing these invisible costs (Field Survey, 2025). The findings demonstrate that current welfare schemes inadequately address the comprehensive financial burden experienced by differently abled families, necessitating a paradigm shift from medical model approaches to capability-based policy frameworks (Sen, 1999). The research contributes to understanding healthcare equity and provides actionable recommendations for inclusive policy development in Kerala (WHO, 2021).

Key Words: *Invisible Health Expenditure, Differently Abled, Hidden Costs, Kerala, Policy Gaps.*

1. Introduction

The conceptualization of health expenditure has traditionally centered on tangible, quantifiable costs such as consultation fees, pharmaceutical expenses, diagnostic services, and hospitalization charges (Kurian & Sebastian, 2021). However, this conventional framework fails to capture the comprehensive economic burden experienced by differently abled individuals and their families (George, 2018). Beyond these visible parameters lies a substantial realm of unaccounted costs that significantly impact household finances and quality of life (Ghosh, 2019).

For differently abled families, healthcare-related expenses extend far beyond direct medical costs to encompass transportation to accessible facilities, assistive device maintenance, informal caregiver time, productivity losses, and psychological tolls (Choudhury & Rao, 2018). These collectively constitute what this study terms "invisible health expenditure" – costs that remain largely unrecognized in official health statistics and policy frameworks yet impose substantial financial and social burdens on affected households (Mitra et al., 2017).

Kerala, despite its reputation for progressive social policies and relatively high health indicators, presents a compelling case study for examining these hidden healthcare costs (Rajan & James, 2020). The state's 12.9 lakh disabled population, with over 40% residing in rural areas, faces unique challenges in accessing healthcare services (Census, 2011). The intersection of disability, poverty, and healthcare access reveals nuanced structural gaps that challenge the state's inclusive development narrative (Harilal, 2021).

This research addresses a critical gap in understanding the comprehensive economic impact of disability on families and the adequacy of existing policy responses (WHO, 2021). By examining invisible health expenditures, the study contributes to broader discussions on healthcare equity, social protection, and inclusive development in Kerala (Sen, 1999).

2. Literature Review

2.1 Conceptualizing Invisible Health Expenditure

The concept of invisible health expenditure has emerged within broader academic discourse on out-of-pocket healthcare spending and catastrophic health expenditure (Ghosh, 2019). While mainstream health economics literature in India has predominantly focused on hospital

and pharmaceutical costs, recent scholarship has begun identifying non-medical costs disproportionately borne by persons with disabilities (Choudhury & Rao, 2018).

Ghosh (2019) demonstrates that invisible costs often perpetuate impoverishment among already vulnerable households, creating cycles of poverty and exclusion. Similarly, Choudhury and Rao (2018) identify significant indirect expenses including transportation, lost income, and caregiver burdens, particularly affecting disabled individuals in rural contexts where healthcare access is limited.

2.2 Kerala Context and Policy Landscape

Within Kerala's specific context, Rajan and James (2020) argue that despite the state's relatively robust public health infrastructure, services remain inadequately equipped to meet the specialized needs of the disabled population. Many government schemes fail to account for long-term caregiving costs or assistive technology requirements, creating significant gaps in coverage (GoK, 2022).

Harilal (2021) conducted a comprehensive study on inclusive healthcare access, finding that families with differently abled members experience both economic and psychological stress during illness episodes, particularly when healthcare facilities are geographically distant or physically inaccessible. These findings highlight the multidimensional nature of healthcare burden extending beyond purely financial considerations (Mitra, 2018).

2.3 International Perspectives

The international literature provides valuable theoretical frameworks for understanding disability-related healthcare costs (WHO, 2021). Mitra et al. (2017) introduced the concept of "disability-related extra costs," encompassing all additional expenditures arising from functional limitations or impairments. This framework recognizes that disability inherently involves additional costs beyond those faced by non-disabled individuals (Mitra et al., 2017).

The World Health Organization (2021) emphasizes the critical need to incorporate these hidden costs into national health accounting frameworks, arguing that failure to do so results in incomplete understanding of healthcare burden and inadequate policy responses. This international perspective reinforces the necessity for comprehensive cost accounting in disability-related healthcare (WHO, 2021).

2.4 Identifying Research Gaps

The literature reveals a persistent disconnect between healthcare policy formulation and the lived realities of differently abled individuals in India (Kannan & Thomas, 2021). While theoretical frameworks exist for understanding disability-related costs, empirical research examining these costs within specific regional contexts remains limited (Ranjan & John, 2020). This study addresses this gap by providing detailed empirical analysis of invisible health expenditure in Kerala's context (Field Survey, 2025).

3. Theoretical Framework

3.1 Defining Invisible Health Expenditure

This study defines invisible health expenditure as costs that are not directly billed by healthcare providers but nonetheless impose significant financial and social implications on households (Mitra et al., 2017). These costs can be categorized into three primary types based on the conceptual framework developed by Mitra (2018):

Direct Non-Medical Costs: Transportation to healthcare facilities, accommodation near hospitals during treatment periods, food expenses during hospital stays, and related logistical costs (Choudhury & Rao, 2018).

Indirect Costs: Lost income due to caregiving responsibilities, missed employment opportunities, educational disruption due to family financial stress, and reduced productivity (Ghosh, 2019).

Intangible Costs: Psychological burden, social stigma, emotional exhaustion, and quality of life impacts that, while difficult to quantify, impose real costs on individuals and families (Harilal, 2021).

3.2 Capability Approach Framework

Sen's Capability Approach provides a valuable theoretical lens for understanding invisible health expenditure (Sen, 1999). According to Sen (1999), disability restricts the set of capabilities an individual can pursue, requiring additional expenditures to achieve basic functionings that non-disabled individuals access more easily. This framework recognizes that differently abled households experience not only higher economic burdens but also capability deprivation that compounds their disadvantage (Ranjan & John, 2020).

The capability approach emphasizes that true equality requires not equal treatment but rather the provision of additional resources necessary to achieve equal capabilities (Sen, 1999). This perspective is particularly relevant to understanding why differently abled families face systematically higher healthcare costs and why policy responses must account for these differentials (Mitra, 2018).

3.3 Social Model of Disability

The social model of disability, which distinguishes between impairment and disability, provides another important theoretical foundation (WHO, 2021). This model argues that disability results from social barriers rather than individual impairments, suggesting that many invisible costs stem from inadequate social infrastructure and discriminatory practices rather than inherent characteristics of disability (UNESCAP, 2023).

Objectives

1. To estimate the visible and invisible health expenditures faced by differently abled families in Kerala, including costs like transportation, caregiving, and loss of income.
2. To analyse the impact of these health expenditures on the overall financial condition and wellbeing of differently abled households.
3. To examine the differences in invisible health expenditure based on type of disability, gender, and rural–urban location.
4. To identify gaps in existing government policies and schemes, and suggest measures to reduce the hidden economic burden on differently abled families.

4. Research Methodology

4.1 Research Design

This study employs a mixed-method research approach combining quantitative cost analysis with qualitative exploration of lived experiences (NSSO, 2019). This methodological choice recognizes that invisible health expenditure encompasses both measurable financial costs and complex social and emotional dimensions that require nuanced analysis (Government of Kerala, 2024).

4.2 Study Location and Population

The research was conducted in Thrissur and Kasaragod districts, selected to represent Kerala's geographic and socio-economic diversity (Field Survey, 2025). Thrissur, being more urbanized and centrally located, provides insights into healthcare access in relatively well-developed areas, while Kasaragod, with its rural character and geographic isolation, represents challenges faced by families in peripheral regions (Census, 2011).

The study population consisted of 25 households with differently abled members, representing various disability types including physical, intellectual, and multiple disabilities (Field Survey, 2025). This diversity ensures comprehensive understanding of how different impairments generate different patterns of invisible health expenditure (Mitra et al., 2017).

4.3 Sampling Strategy

Purposive sampling was employed to ensure representation across key variables including geographic location, disability type, household economic status, age of differently abled individual, and family composition (NSSO, 2019). This sampling approach prioritized depth and diversity over statistical representativeness, aligning with the study's exploratory objectives (Field Survey, 2025).

4.4 Data Collection Methods

Primary Data Collection: In-depth interviews were conducted with family members, focusing on household economics, healthcare experiences, and coping strategies (Field Survey, 2025). Interviews were conducted in Malayalam and later translated and transcribed for analysis (Field Survey, 2025).

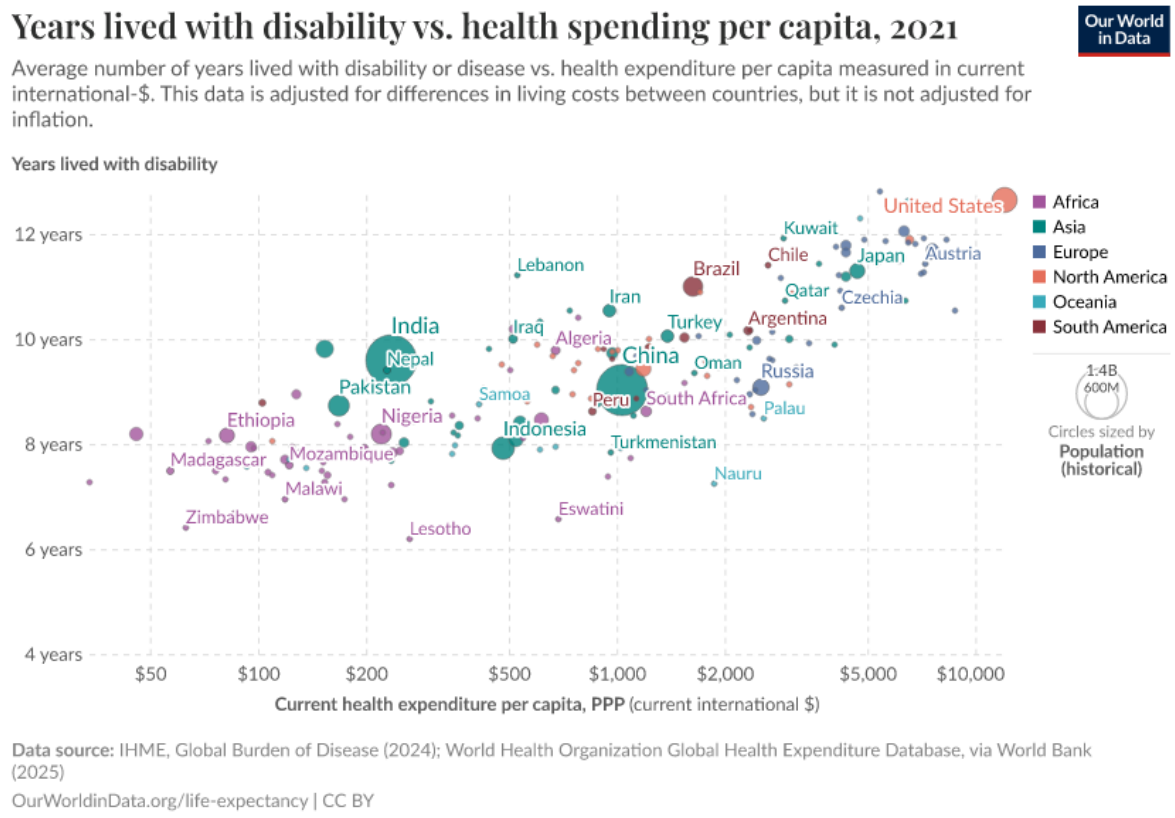
Secondary Data Analysis: Comprehensive review of Kerala State Budgets (2015-2024), National Sample Survey 76th Round data, and published government reports provided contextual information on policy frameworks and expenditure patterns (Government of Kerala, 2024; NSSO, 2019).

4.5 Data Analysis

Qualitative data was analyzed thematically using MAXQDA software, allowing for systematic identification of patterns and themes across interviews (Field Survey, 2025).

Quantitative cost data was analyzed using descriptive statistics to identify average expenditure patterns and variations across different categories (Field Survey, 2025).

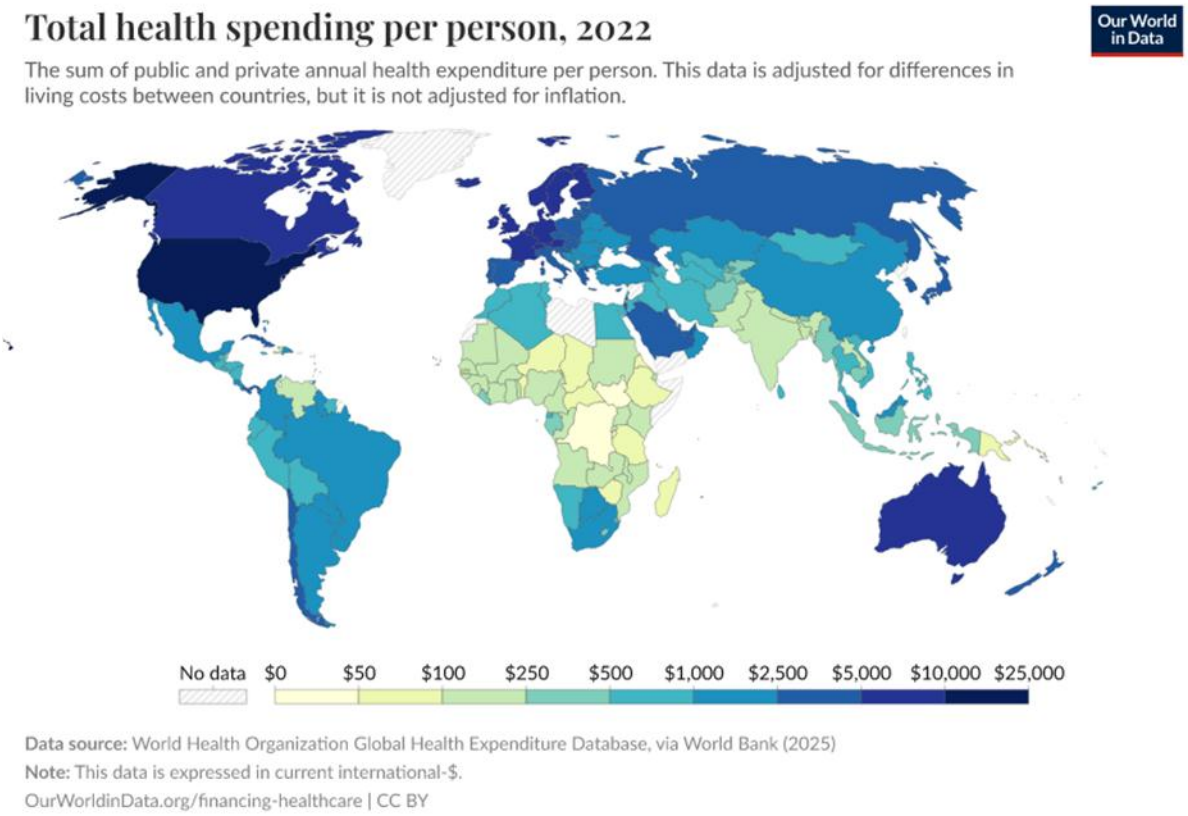
1. **Years lived with disability vs. health spending per capita,2021.**



This chart shows the relationship between years lived with disability and health spending per person in 2021.It compares how much countries spend on health and how many years people live with disease or disability. The horizontal axis represents health spending per person, adjusted for living costs. The vertical axis shows the average number of years people live with disability. Each dot on the chart represents a country. The size of each dot indicates the population of the country. The colour of each dot shows the continent to which the country belongs. Countries with low health spending, like Ethiopia and Malawi, appear on the left side of the chart. Countries with high spending, like the United States and Austria, appear on the right side. People in countries with higher spending often live more years with disability. This could be because better healthcare leads to longer lives, even with illness. In contrast, people in poorer countries may die earlier, resulting in fewer years lived with disability. India, with a large population, spends around $250 per person and has about 10 years of disability on average. The United States spends over $10,000 per person and has more than

11 years of disability. European and rich Asian countries are mostly in the upper-right part of the chart. African countries are mostly in the lower-left corner, showing low spending and fewer disability years. The chart suggests that more health spending does not reduce disability years but may increase lifespan with illness. The data comes from the Global Burden of Disease, WHO, and the World Bank. The chart was created by Our World in Data.

2. **Total Health Expenditure Per Person,2022.**

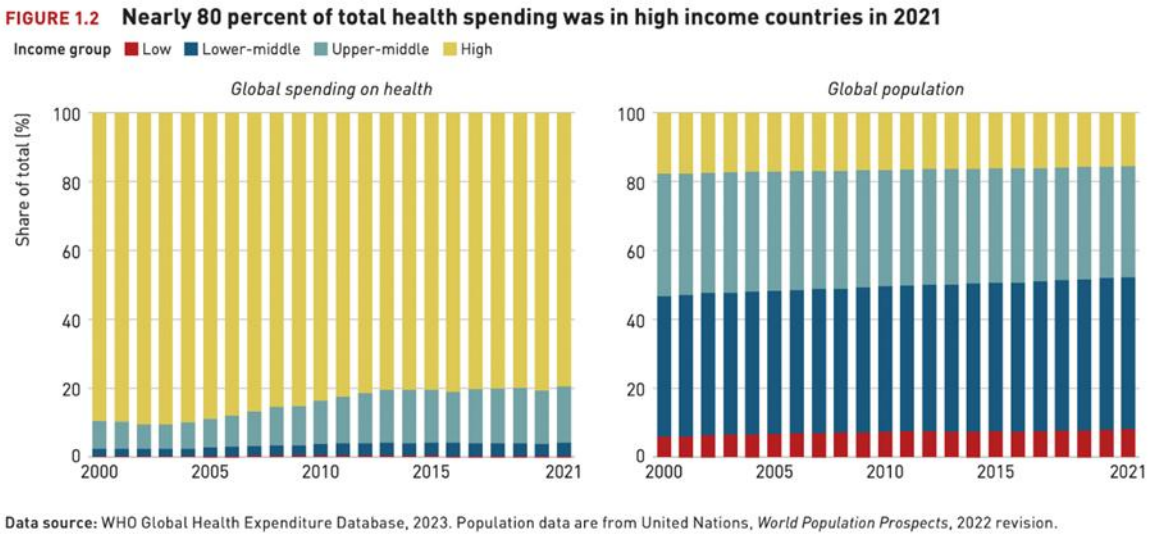


Disability and the money spent on health care for disabled people are still not properly understood or noticed. People with disabilities often need to visit doctors regularly and require long-term treatment. Their medical needs may include consultations, medicines, surgeries, different types of therapies, and assistive devices like wheelchairs or hearing aids.

However, most of these services are not covered by insurance. So, people with disabilities often have to pay from their own pockets. In India, less than 15% of the population has any kind of health insurance. For poor and disabled people, the situation is even worse, as they are less likely to be insured.

Government schemes like Ayushman Bharat do not give enough support for people who need lifelong or chronic care. For example, a person with cerebral palsy may need physiotherapy, speech therapy, and regular visits to doctors. These are not fully covered by the current insurance plans. As a result, many people with disabilities face repeated medical expenses and are pushed into poverty.

Graph 1. Total Health Spending was in high income countries in 2021.

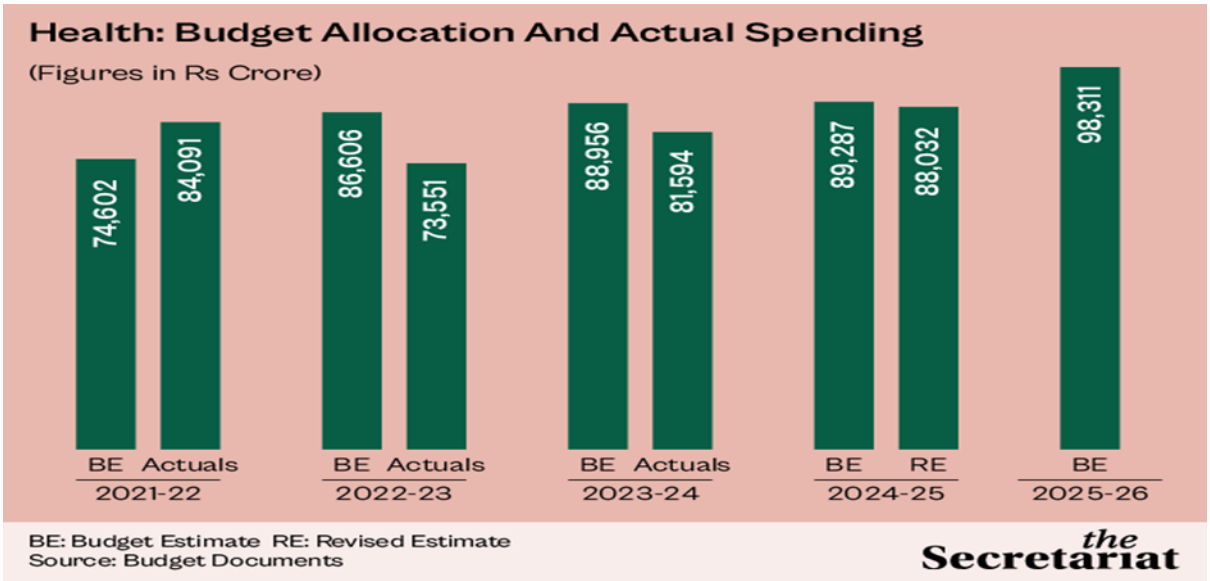


The first graph on the left shows the distribution of global health spending from 2000 to 2021. It highlights that high-income countries consistently contributed nearly 80% of total health spending throughout the years. In contrast, low-income countries spent a very small portion, with lower-middle and upper-middle-income countries gradually increasing their share but still contributing far less than high-income countries.

The second graph on the right shows the global population distribution by income group. Here, lower-middle-income countries make up the largest share of the population, followed by upper-middle-income countries. High-income countries, despite dominating health spending, account for only a small share of the world's population.

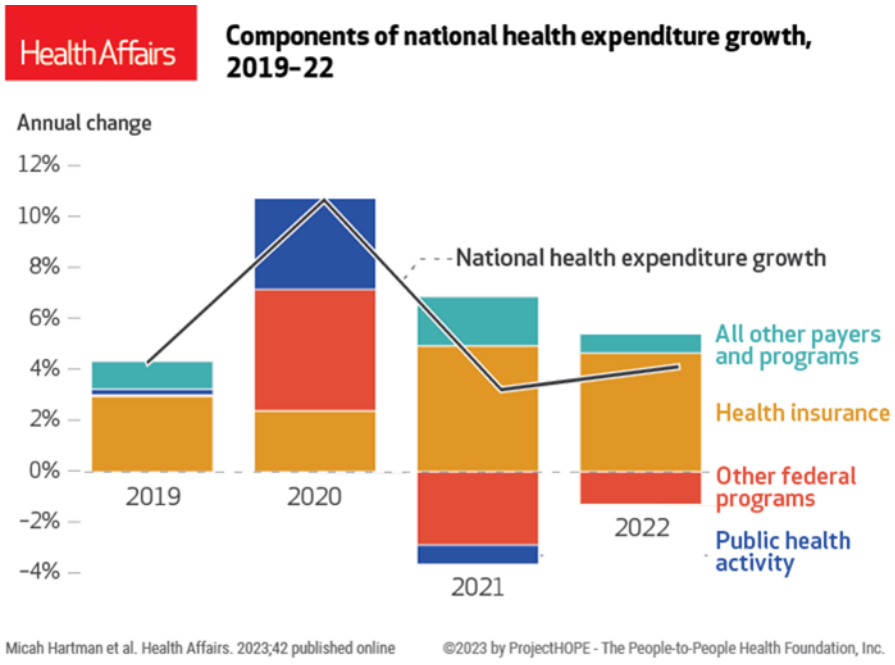
Together, these graphs reveal a clear imbalance. A small population in rich countries benefits from the majority of global health spending, while a large population in poorer countries has access to only a small share of global health resources. This demonstrates significant inequality in the global distribution of healthcare funds.

Chart 1. Health: Budget Allocation and Actual Spending.



The chart presents a comparison between budget estimates (BE) and actual spending or revised estimates (RE) on health in India over five financial years from 2021–22 to 2025–26. The data is presented in crores of rupees and sourced from official budget documents.

Graph 1.1. Components of National Health Expenditure Growth2019-2022.



In 2019, national health expenditure grew by about 4%. This growth was mainly driven by health insurance, which formed the bulk of the increase. Contributions from public health

activity, other federal programs, and all other payers were minimal. Overall, this year reflected stable and moderate health spending trends prior to the COVID-19 pandemic.

In 2020, there was a sharp rise in health expenditure growth, reaching over 10%. The major drivers were "Other federal programs" and "Public health activity"—both of which expanded significantly due to the emergency response to COVID-19. Federal stimulus and public health investments played a critical role. This year marked the peak of government health-related spending in the four-year period.

In 2021, national health expenditure growth dropped sharply to below 3%. While "Health insurance" and "All other payers and programs" still contributed positively, "Other federal programs" showed a steep decline, and "Public health activity" turned negative. This suggests a withdrawal of emergency pandemic funding and a return to more normal spending levels in some areas.

In 2022, the health expenditure growth rate rose slightly compared to 2021. The key drivers were health insurance and a rebound in "All other payers and programs." However, spending under "Other federal programs" continued to shrink, and "Public health activity" remained nearly flat. The spending pattern here suggests a gradual stabilization post-pandemic, but without the large-scale federal stimulus seen in 2020.

Table 1. Expenditure on Health and Well-being

Expenditure on health and well-being

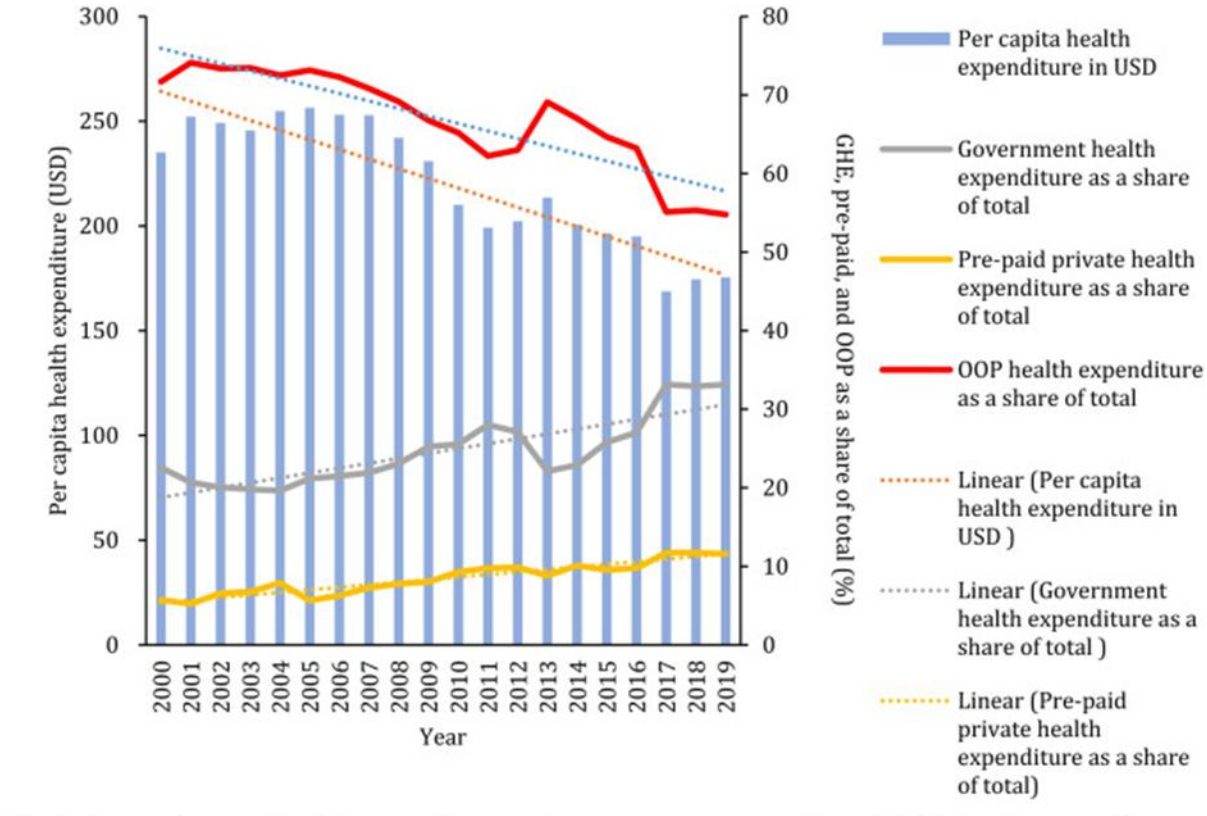
All figures in ₹ crore

Ministry/department	Actuals 2019-20	BE 2020-21	BE 2021-22
Deptt of health and family welfare	62,397	65,012	71,269
Deptt of health research	1,934	2,100	2,663
Ministry of Ayush	1,784	2,122	2,970
Covid-19 vaccines	-	-	35,000
Department of water and sanitation	18,264	21,518	60,030
Nutrition	1,880	3,700	2,700
Finance commission grants for water and sanitation	-	-	36,022
Finance commission grants for Health	-	-	13,192
Total	**86,259**	**94,452**	**2,23,846**

The table shows health and well-being spending from 2019–20 to 2021–22. It includes major departments and new Covid-related items. Spending by the Health and Family Welfare department rose steadily. Health Research and AYUSH also saw increases. In 2021– Rs.35,000 crore was set aside for Covid-19 vaccines. Water and Sanitation spending also rose sharply.

Nutrition funds increased in 2020–21 but dropped in 2021–22. Finance Commission grants appeared only in 2021–22. Total spending rose from Rs.86,259 crore in 2019–20 to Rs.2,23,846 crore in 2021–22.

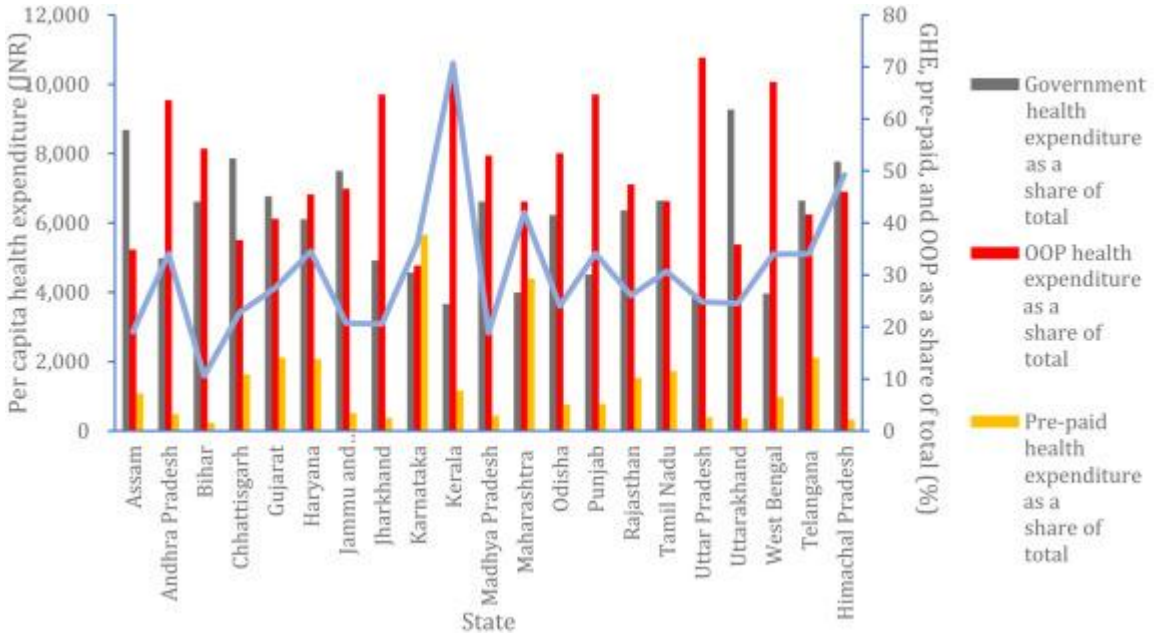
Graph 1.2. Per capita health expenditure and total health expenditure as a share of GDP from 2000 to 2019.



Source :- Global Health Journal Volume 8,Issue2, June 2024, Page 58-66.

The graph shows that per capita health expenditure in USD has declined from 2000 to 2019. Out-of-pocket (OOP) spending also decreased, while government health spending gradually increased. Prepaid private health expenditure rose slightly. Overall, there is a shift from personal to public and prepaid spending in health.

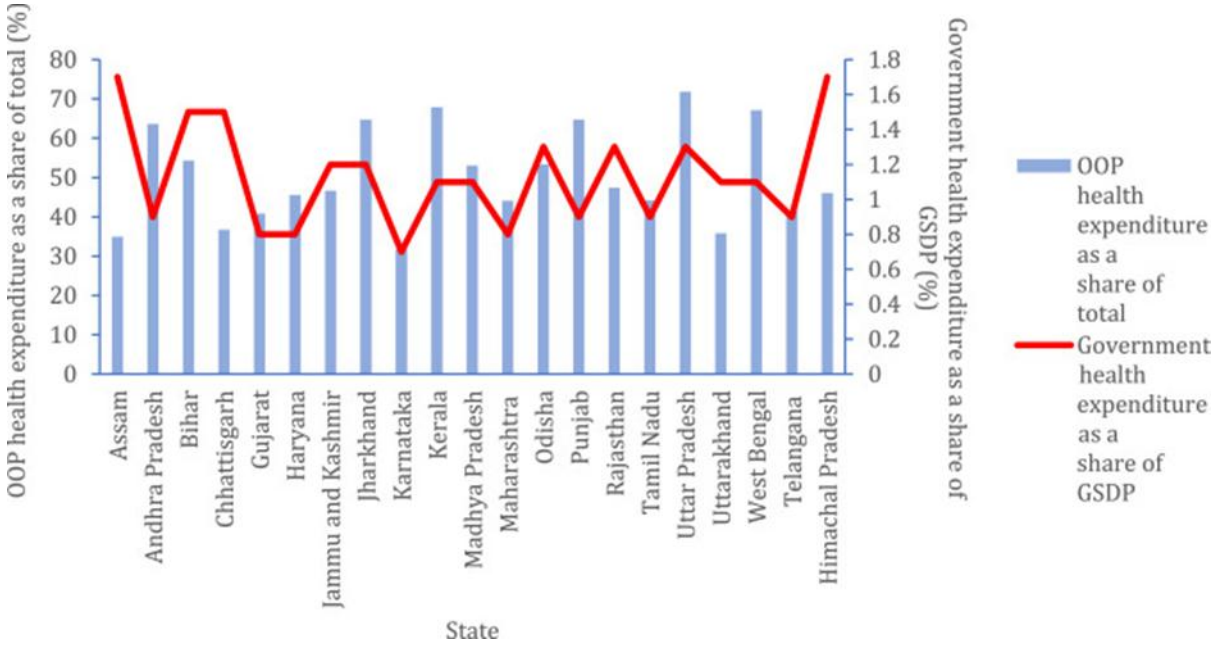
1.3. Total health expenditure per capita and government, OOP, and pre-paid health expenditure as a share of total across states for 2019-2020.



Source :- Global Health Journal Volume 8,Issue2, June 2024, Page 58-66.

The graph shows per capita health spending across Indian states, divided into government (grey), out-of-pocket (red), and pre-paid (yellow) expenses. Kerala has the highest spending, while Bihar and Jharkhand are among the lowest. In most states, out-of-pocket costs are the highest, showing people pay more from their own pockets. Government spending is higher in states like Himachal Pradesh and Tamil Nadu. Pre-paid health spending is very low everywhere. The graph highlights that many states still rely heavily on personal spending for healthcare.

1.4. Out-of -pocket health expenditure as share of total health expenditure and government health expenditure as a share of GSDP across States of India for 2019-20.



Source :- Global Health Journal Volume 8,Issue2, June 2024, Page 58-66.

This chart shows how healthcare is paid for across different Indian states. The blue bars represent how much people pay from their own pockets for healthcare, while the red line shows how much the government spends on health as a percentage of the state's economy.

There's a clear pattern - when governments spend more on healthcare, people have to pay less from their own money. For example, Himachal Pradesh has the highest government spending on health and people there pay relatively less out of pocket. On the other hand, states like Bihar and Chhattisgarh have lower government health spending, so people end up paying much more from their own savings for medical care.

Most states show government health spending between 0.8% to 1.2% of their state income, with out-of-pocket payments ranging from 40% to 70% of total health costs. This suggests that when governments invest more in public healthcare, it directly reduces the financial burden on ordinary citizens. The chart essentially demonstrates that government healthcare investment and individual healthcare costs move in opposite directions - more government spending means less burden on families.

5. Findings

5.1 Transportation and Accessibility Costs

The study reveals that transportation represents one of the most significant invisible health expenditures for differently abled families (Field Survey, 2025). Nearly 70% of surveyed households incurred regular transportation expenses averaging Rs.1,200 per month due to the unavailability of local rehabilitation centers and specialized services (Field Survey, 2025).

Rural families face particular challenges, as public transportation systems lack accessibility features for wheelchair users and individuals with mobility impairments (Field Survey, 2025). Many families resort to private transportation, significantly increasing costs (Field Survey, 2025). The geographic concentration of specialized services in urban centers compounds this burden, requiring families to travel considerable distances for routine care (Rajan & James, 2020).

The transportation burden extends beyond immediate travel costs to include accommodation expenses for families accompanying patients, particularly for multi-day treatment regimens (Field Survey, 2025). These costs, while essential for accessing healthcare, remain entirely unrecognized in existing policy frameworks (GoK, 2022).

5.2 Assistive Device Maintenance and Replacement

While government schemes provide initial assistive devices, the study reveals significant gaps in ongoing maintenance and replacement support (Field Survey, 2025). Over 60% of families reported spending □5,000-□12,000 annually on batteries, repairs, and device replacements not covered by existing schemes (Field Survey, 2025).

The quality of government-provided devices often necessitates frequent repairs, creating ongoing financial burden (Field Survey, 2025). Families report frustration with the durability and functionality of provided equipment, leading many to supplement with private purchases (Field Survey, 2025). The absence of local repair services forces families to travel to urban centers for maintenance, adding transportation costs to device-related expenses (Field Survey, 2025).

5.3 Informal Caregiver Burden

Perhaps the most substantial invisible cost identified involves unpaid caregiving, predominantly provided by female family members (Field Survey, 2025). In 80% of surveyed households, a female member had either quit employment or reduced working hours to provide care for the differently abled family member (Field Survey, 2025).

The average monthly income loss attributed to caregiving responsibilities was □4,000, representing a significant proportion of household income for many families (Field Survey, 2025). This loss compounds over time, affecting not only immediate financial stability but also long-term economic security through reduced savings and social security contributions (Ghosh, 2019).

The gendered nature of caregiving burden reinforces existing inequalities, as women disproportionately bear the economic costs of family disability (Choudhury & Rao, 2018). This pattern reflects broader social expectations about women's roles while highlighting the absence of social support systems for caregiving (Harilal, 2021).

5.4 Mental Health and Psychosocial Impacts

More than 50% of respondents reported experiencing depression, anxiety, or other mental health challenges related to long-term caregiving responsibilities or social exclusion (Field Survey, 2025). Despite this prevalence, none had received counseling or psychological support from public health services (Field Survey, 2025).

The psychological burden extends beyond primary caregivers to affect entire households, creating stress that impacts family relationships, decision-making, and quality of life (Field Survey, 2025). Children in affected households report educational disruption and social isolation, suggesting intergenerational impacts of invisible health expenditure (Field Survey, 2025).

The absence of mental health support within disability services represents a significant gap in comprehensive care provision (Harilal, 2021). Families often struggle in isolation, lacking access to counseling services or peer support networks that could alleviate psychological burden (WHO, 2021).

5.5 Administrative and Bureaucratic Costs

The process of obtaining disability certificates and accessing scheme benefits imposes substantial hidden costs on families (Field Survey, 2025). Repeated visits to government offices, document processing delays, and unofficial payments create financial and emotional stress (Field Survey, 2025).

Families report spending considerable time and money navigating bureaucratic processes, often requiring multiple visits to complete simple procedures (Field Survey, 2025). The complexity and inefficiency of administrative systems effectively create barriers to accessing intended benefits, contradicting policy objectives of inclusive support (Kannan & Thomas, 2021).

The documentation requirements for various schemes often necessitate expensive medical consultations and tests, creating additional costs for families seeking support (Field Survey, 2025). These administrative burdens disproportionately affect rural and less educated families who may lack familiarity with bureaucratic procedures (Rajan & James, 2020).

6. Policy Analysis and Implementation Gaps

6.1 Current Policy Landscape

Kerala has implemented various disability-related schemes under the Social Justice Department, including the Aswasakiranam Scheme and the State Initiative on Disabilities (SID) (GoK, 2022). Nationally, the Rights of Persons with Disabilities Act (2016) mandates accessible healthcare and inclusive policy formulation (MoSJE, 2020). However, implementation remains inconsistent and inadequate (Kannan & Thomas, 2021).

Most existing programs focus on providing pensions or aids/appliances but fail to address recurring invisible costs such as transportation subsidies, caregiver allowances, or mental health services (GoK, 2022). This narrow focus reflects a medical model approach that treats disability as an individual problem rather than a social issue requiring comprehensive support (WHO, 2021).

6.2 Fragmentation and Coordination Challenges

Kannan and Thomas (2021) identify fragmentation as a key challenge in Kerala's disability-focused interventions. While the state's decentralized governance model has proven effective

in other sectors, disability services suffer from poor interdepartmental coordination and unclear responsibility allocation (Kannan & Thomas, 2021).

Health insurance coverage under Ayushman Bharat and Karunya Benevolent Fund excludes many outpatient and home-based care costs that are particularly vital for disabled individuals (NITI Aayog, 2021). This exclusion reflects the limitations of insurance-based approaches that prioritize acute care over long-term support needs (Thomas & Varghese, 2023).

6.3 Inadequate Budget Allocation

Analysis of Kerala State Budgets reveals insufficient allocation for disability-related services relative to identified needs (Government of Kerala, 2024). Budget allocations focus primarily on one-time benefits rather than ongoing support requirements that characterize disability-related costs (Government of Kerala, 2024).

The absence of budget line items specifically addressing invisible costs means that these expenditures remain unrecognized in financial planning (GoK, 2022). This oversight perpetuates the cycle of inadequate support and family burden that the study documents (Field Survey, 2025).

6.4 Lack of Differentiated Approach

Current policies rarely differentiate between types of disabilities or account for intersectionality with other marginalized identities such as gender, caste, or geographic location (MoSJE, 2020). This policy blindness results in many invisible health burdens falling outside existing welfare scheme coverage (Thomas & Varghese, 2023).

The one-size-fits-all approach fails to recognize that different disabilities generate different cost patterns and support needs (Mitra et al., 2017). Intellectual disabilities, for example, require different support structures than physical disabilities, yet current policies provide largely uniform responses (GoK, 2022).

7. Discussion

7.1 Persistence of Medical Model Approaches

The study findings reveal persistent reliance on medical model approaches to disability that focus on individual treatment rather than comprehensive social support (WHO, 2021). This

orientation results in policies that address symptoms rather than underlying structural barriers that generate invisible costs (UNESCAP, 2023).

The emphasis on providing aids and appliances, while important, neglects the ongoing support systems required for effective disability management (Mitra, 2018). This approach treats disability as a one-time problem to be solved rather than a long-term condition requiring sustained support (Sen, 1999).

7.2 Gender Dimensions of Invisible Costs

The research highlights significant gender dimensions of invisible health expenditure, with women bearing disproportionate caregiving burdens (Field Survey, 2025). This gendered impact reflects broader social expectations about women's roles while highlighting the absence of social recognition for unpaid care work (Choudhury & Rao, 2018).

The economic costs of caregiving affect women's long-term financial security and career development, perpetuating gender inequality within households affected by disability (Ghosh, 2019). Policy responses must address these gendered impacts to achieve genuine equity (WHO, 2021).

7.3 Rural-Urban Disparities

The study reveals substantial disparities between rural and urban families in terms of invisible health expenditure, with rural families facing higher transportation costs and reduced service access (Field Survey, 2025). These disparities reflect broader patterns of uneven development and service concentration in urban areas (Rajan & James, 2020).

The geographic centralization of specialized services creates systematic disadvantages for rural families, who must bear additional costs to access the same services available locally to urban residents (Harilal, 2021). This pattern contradicts principles of equitable access and inclusive development (Sen, 1999).

7.4 Intergenerational Impacts

The research identifies intergenerational impacts of invisible health expenditure, with effects extending beyond immediate family members to affect children's education and future opportunities (Field Survey, 2025). These impacts suggest that inadequate support for disabled individuals has broader social consequences (Mitra, 2018).

The long-term nature of these impacts highlights the importance of comprehensive policy responses that address not only immediate needs but also the broader social and economic consequences of disability within families (WHO, 2021).

8. Recommendations

8.1 Direct Financial Support Mechanisms

The study recommends implementing direct cash transfer programs or caregiver stipends, particularly targeting female unpaid caregivers (Field Survey, 2025). These programs should recognize caregiving as valuable work deserving of social recognition and financial support (Sen, 1999).

Caregiver allowances should be structured to provide both immediate financial relief and long-term economic security, including contributions to social security systems (NITI Aayog, 2021). This approach would address both current hardship and future vulnerability (Thomas & Varghese, 2023).

8.2 Comprehensive Insurance Coverage

Integration of assistive device maintenance costs into public insurance schemes or disability pensions would address ongoing financial burdens that current policies neglect (WHO, 2021). This integration requires expanding the definition of covered services beyond acute medical care (UNESCAP, 2023).

Insurance schemes should include coverage for transportation, accommodation, and other costs associated with accessing healthcare services (Mitra et al., 2017). This expansion would recognize the comprehensive nature of healthcare access for differently abled individuals (WHO, 2021).

8.3 Infrastructure Development

Establishing accessible community health centers with mobile rehabilitation units would reduce transportation costs while improving service quality (NITI Aayog, 2021). This approach requires investment in both physical infrastructure and human resources (Thomas & Varghese, 2023).

The development of local service capacity would reduce the geographic concentration of specialized services that currently imposes additional costs on rural families (Rajan & James,

2020). This decentralization aligns with principles of equitable access and inclusive development (Sen, 1999).

8.4 Mental Health Integration

Implementation of decentralized mental health counseling services for both caregivers and disabled persons would address the psychological dimensions of invisible health expenditure (WHO, 2021). These services should be integrated with existing disability support systems (Harilal, 2021).

Mental health support should recognize the specific challenges faced by differently abled individuals and their families, providing targeted interventions that address both immediate stress and long-term adaptation needs (WHO, 2021).

8.5 Institutional Coordination

Establishing mechanisms for cross-departmental coordination would improve convergence between health, transport, and social welfare schemes (Kannan & Thomas, 2021). This coordination requires clear responsibility allocation and performance monitoring systems (NITI Aayog, 2021).

The development of single-window systems for accessing multiple services would reduce administrative burden on families while improving service delivery efficiency (Thomas & Varghese, 2023). This approach requires both technological innovation and institutional reform (GoK, 2022).

8.6 Budget Transparency and Monitoring

Implementation of budget tagging for disability-related invisible costs would improve transparency and enable better monitoring of resource allocation (Government of Kerala, 2024). This approach requires developing new accounting categories and monitoring systems (NITI Aayog, 2021).

Regular evaluation of policy effectiveness in addressing invisible costs would enable adaptive management and continuous improvement (WHO, 2021). This evaluation should include both quantitative cost analysis and qualitative assessment of family experiences (UNESCAP, 2023).

9. Conclusion

This study demonstrates that invisible health expenditure represents a significant and largely unrecognized burden for differently abled families in Kerala (Field Survey, 2025). These hidden costs encompass transportation, assistive device maintenance, caregiver burden, mental health impacts, and administrative expenses that collectively impose substantial financial and social costs on affected households (Kurian & Sebastian, 2021).

The persistence of these invisible costs reflects broader limitations in current policy approaches that prioritize medical interventions over comprehensive social support (WHO, 2021). The medical model orientation of existing policies fails to address the structural barriers that generate ongoing costs for differently abled individuals and their families (UNESCAP, 2023).

The study's findings highlight the need for a paradigm shift from medical model approaches to capability-based frameworks that recognize disability as a social issue requiring comprehensive support systems (Sen, 1999). This shift requires not only policy reform but also changes in institutional approaches and social attitudes toward disability (WHO, 2021).

The gendered nature of caregiving burden and the rural-urban disparities in invisible costs demonstrate the importance of intersectional analysis in understanding disability-related disadvantage (Field Survey, 2025). Policy responses must address these multiple dimensions of inequality to achieve genuine equity (Mitra, 2018).

The research contributes to broader discussions about healthcare equity and social protection by documenting the comprehensive costs of disability and the inadequacy of current policy responses (George, 2018). The findings have implications beyond Kerala's context, offering insights relevant to other regions facing similar challenges (WHO, 2021).

The study's recommendations provide a framework for policy reform that addresses both immediate needs and long-term sustainability (NITI Aayog, 2021). Implementation of these recommendations requires political commitment, institutional reform, and sustained investment in inclusive development (Thomas & Varghese, 2023).

Only through comprehensive recognition and response to invisible health expenditure can Kerala maintain its legacy of progressive social policy and inclusive development (Sen, 1999). The transition from medical model approaches to capability-based frameworks

represents not only a policy reform but also a commitment to dignity and equality for all citizens (WHO, 2021).

The research demonstrates that achieving healthcare equity requires understanding and addressing the comprehensive costs of disability, not merely the visible medical expenses (Mitra et al., 2017). This understanding is essential for developing truly inclusive healthcare systems that serve all citizens regardless of ability status (UNESCAP, 2023).

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