Chapter 2

LITERATURE REVIEW

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2.1. Introduction:

Researchers have explored different dimensions of healthcare financing at international and national levels. Out-of-pocket healthcare expenditures are a significant part of the healthcare financing landscape for every country. The public spending and OOP expenses share an inverse relation, i.e., when public investment in healthcare is high, OOP remains low, and vice versa. OOP health expenditure is also an indicator of the extent of financial protection available to the people of the nation. The OOP expense solely can help in understanding the financial burden of healthcare imposed on the individuals. Hence, the following sections discuss out-of-pocket health expenses and its multiple aspects explored so far.

OOP health expense has been a prime topic of study for different academicians, economists, social scientists, and policymakers over a long time. A vast set of works of literature addressing the various issues of OOP health expenses is available in the form of research articles, working paper series, as well as reports (in both print and online mode) starting from the late 19th century till recent times. The focus of these studies is geographically scattered, covering from east to west, north to south of the globe. There is a significant amount of literature on OOP expenses published by international organizations like WHO, World Bank, etcetera. These studies mostly address the issues at the continent level. A substantial number of country-specific studies on OOP health expenditures and the different aspects are also available. However, the number of studies based on developing and underdeveloped countries (like Namibia, Rwanda, Liberia, and many more) is more in the count, compared to studies on the settings of developed countries. In the following segments, based on these existing literature bodies, we have attempted to bring out a comparative assessment of the different aspects of OOP health expenses and identify the underlying gaps that should be explored further.

2.2. Literature Review:

2.2.1. Healthcare Expenses and Its Determining Factors:

The consumption of healthcare services is mostly irregular and unpredictable, thus the amount of money spent on it. The households bear the healthcare expenses for every member of the family, as a single financing unit. Families with the same health

conditions, at times, might end up paying different amounts out of their own pockets. Several variables affect the extent of a household's OOP expenses. According to Wagstaff, Eozenou, & Smitz (2020), some people might not receive the needed care or unknowingly pay for unnecessary care; affordability to pay out-of-pocket also varies from people to people. There can be differences in insurance coverage, and the presence of multiple health conditions may affect the overall treatment process, as well.

a) Healthcare Costs and Population Demography:

Demographic variables, like gender, education level of the patient/household members, age, and many more, often act as some of the primary indicators of OOP health expenses. For decades, gender has been a prime differential for the health sector. Healthcare access and spending mostly favor the male members of the family. Multiple studies based in China, Namibia, Rwanda, Liberia, as well as India, have registered that, most of the time, healthcare resource allocation is higher for males than the females (Gao & Yao, 2006; Wang, Temsah, & Carter, 2016; Molla, Chi, & Mondaca, 2017; Brinda, Rajkumar, Enemark, Prince, & Jacob, 2012). Spending by households on female healthcare is often less than on male healthcare (Saikia, Moradhvaj, & Bora, 2016; Moradhvaj & Saikia, 2019). On the other hand, the presence of aged people in households makes families more vulnerable to OOP health expenses. The effect of aging on healthcare expenses is pretty substantial as the OOP expense follows an uprising trend with the increase in individuals' age (You & Kobayashi, 2011; Wang, Temsah, & Carter, 2016). But a widely visible difference in health expenses exists between higher-income and lower-income households with aged people (Rubin & Koelln, 1993). It is because the health expenditures are quite sensitive to the income level of the families (Musgrove, 1983; Parker & Wong, 1997; Rousa & Hotchkissb, 2003). An increase in income level usually causes an increase in expected health expenses (da Silva, et al., 2015; Molla, Chi, & Mondaca, 2017).

Household's socioeconomic status has direct influence over the variations in OOP health expenses, yet the association between income and healthcare spending is not homogenous across the world. The OOP spending on healthcare services mostly seemed less for the weaker section of the society (Wang, Temsah, & Carter, 2016). But it is the poorer households most burdened by the various costs of treatments (Chuma & Maina, 2012). OOP expenses are very compelling amidst Nigerian houses, and financing incidence analysis has proven that OOP incidence is regressive in nature (Onwujekwe,

Hanson, Ichoku, & Uzochukwu, 2014). Studies have shown that despite the least amount of spending for chronic illnesses, poorest households had four times higher chances of financial catastrophe in comparison the wealthy families (Rahman, Gilmour, Saito, Sultana, & Shibuya, 2013). Gustafsson-Wright, Janssens, & van der Gaag (2011) have also raised concerns regarding the high proportion of health spending to income for the poor households of Namibia. Contrastingly, studies have found that amount of money spent out of pocket for pediatric treatments was statistically higher for the poor compared to wealthy families (Barasa, Ayieko, Cleary, & English, 2012). On the other hand, vast literature sets are also available, reporting no variation on OOP expenses across the income groups in different regions of the world. (Perkins, et al., 2009; Long, Smith, Zhang, Tang, & Garner, 2011; You & Kobayashi, 2011). While in the case of India, based on the decadal trend, Karan, Selvaraj, & Mahal (2014) claimed the increase of financial burden due to health spending was the fastest among the disadvantaged groups. Besides, analysis of OOP health expenses has also revealed that alongside the direct effect of income on OOP health payments, income indirectly influences the choice of providers, as well (Rousa & Hotchkissb, 2003).

In several contexts, the out-of-pocket health payments vary between urban and rural areas too. In the case of Kenya, a national study showed that a higher amount of household budgets was spent on health in urban areas than in rural places (Chuma & Maina, 2012). Onwujekwe, Hanson, Ichoku, & Uzochukwu (2014) also reported similar findings for Nigerian settings. In contrast to this, Hotchkiss, Hutchinson, Malaj, and Berruti (2005) found that a reverse scenario among the patient of Albania, i.e., here the OOP expenses were higher for rural clients. A vast difference in per capita OOP health expenditure is recorded for India as well (Thakur, Sangar, Ram, & Faizan, 2018). Based on the evidence from the NSSO 71st round, Sangar, Dutt, and Thakur (2019) concluded that OOP incidence in rural areas is pro-poor, while, in urban areas, it is mostly pro-rich.

b) Health Expenses and Healthcare Providers:

Most of the time, it is not possible for the public sector to provide an extensive range of healthcare services to the people. In parallel with public providers, private providers operate in different ways, varying from one healthcare system to another. Thus, Preker, Harding, and Travis (2000) claimed that a more integrated approach in the health sector, combining both public and private sector providers, can deliver desirable outputs, in terms of efficiency, quality, and responsiveness. Poor often have limited access to

healthcare due to their weak purchasing power. Studies have proven that with different innovations in health service delivery, private sector facilities can reduce this access gap for the poor (Bhattacharyya, et al., 2010). There are ample cases available claiming the contracting out delivery of healthcare to be highly effective in various settings (Loevinsohn & Harding, 2005; Liu, Hotchkiss, & Bose, 2008). But there is another group of academicians who insists that for equitable access and better outcomes, the system should rely on the public sector (Oxfam International, 2009). Despite this debate, it is hard to ignore the significance of private providers in the health system (Bustreo, Harding, & Axelsson, 2003). Likewise, we also can't dismiss the influence of private healthcare facilities on out-of-pocket health expenses.

In the absence of insurance, OOP health expenses mostly depend on the type of healthcare provider and services used by the patients (Alam & Mahal, 2014) ; it varies widely across the public and private providers (Saksena, Xu, Elovainio, & Perrot, 2012). In general, the private health sector and high out-of-pocket health expenditures share a strong association. From studies, it has even found that, in most of the low and middle-income countries, the OOP expenses in the private facilities are much higher than the OOP expenses in public facilities (Saksena, Xu, Elovainio, & Perrot, 2010). A study set in rural Tanzania found that with user fee exemption, healthcare cost in public facilities is much cheaper than private facilities for maternal healthcare services (Kruk, Mbaruku, Rockers, & Galea, 2008). Similarly, studies on malaria treatment reported the cost of treatment to be higher in private facilities (by 19%) in Tanzania (Mikkelsen-Lopez, et al., 2013) , and in rural Ethiopia (Deressa, Hailemariam, & Ali, 2007), as well. Another cross-sectional study by Beogo, Huang, Gagnon, & Amendah (2016) revealed that the total health expenditures of the households of sub-Saharan Africa urban cities are higher on receiving care from private facilities. Rahman, Rob, Noor, and Bellows (2013), in their study, witnessed a vast difference in costs for antenatal care in public and private facilities; in fact, women had to pay one and half times more for regular and cesarean deliveries at private health facilities compared to public ones. The comparative study between four African countries, the Democratic Republic of the Congo, Liberia, Namibia, and Rwanda, also showed that the spending on health services differed by type of provider (Wang, Temsah, & Carter, 2016). The average out-of-pocket expenditure for inpatient care in a public facility was half or less than a private provider, and the differences in health expenditures among the public, private providers are less noticeable

for outpatient than inpatient care. There are several other studies available, based in India, exhibiting similar results. Most of the research articles on maternal care, institutional deliveries, reported the services in private facilities to be on the costlier side (Bonu, Bhushan, Rani, & Anderson, 2009; Leone, James, & Padmadas, 2012; Mohanty & Srivastava, 2013). Mohanty and Kastor (2017) have also reported that while between 2004 to 2014 maternal care cost in public facilities increased from US$60 to US$86, charges for the same in private facilities rose to US$300. The cross-sectional study by Sinha, Chatterjee, Nair, & Tripathy (2016) has also reported that services received from different types of health providers have a significant association with OOP health expenses, and private healthcare providers are costlier than public providers in India.

Different multi-country and global studies have been carried out on the estimation of out-of-pocket healthcare expenditure at the national levels using several measures. Wagstaff, Eozenou, and Smitz (2020) have reviewed a large body of literature on OOP expenses and identified that there are mainly seven different concepts used in these studies. It includes the following measures: expenditure in absolute terms, dispersion, budget share, progressivity, catastrophic expenditure, inequality in the incidence of catastrophic expenses, and impoverishment. The sources of data needed for such estimations are usually the country-specific standalone household surveys or the multi-country collections. The concept of household expenditure survey is ideal, but the implementation of countrywide unrealistic, especially for low-income countries. It is essential to ensure that policymakers have access to accurate and reliable OOP expenditure estimates (Lavado, Brooks, & Hanlon, 2013). Although household healthcare expenditure is not adequate to way to estimate OOP expenditures, it can provide the consumption side perspective and can also address the countrywide heterogeneity.

2.2.2. Healthcare Expenses and coping strategies of rural households:

The prevalence of high OOP health expenses implies a high financial burden for households, and the consequences of such burdens can be witnessed across the globe at different magnitudes. The academicians mostly emphasize on assessing the impact of such financial strain on the households' future welfare, but studies on the coping strategies adopted by the households to pay for such bills and the probable effect of such strategies, in the long run, are very few. Although coping strategies are often circumstantial, according to different academicians, there are two broad categories (a) cost prevention strategies focused on reducing the probable cost of illness by ignoring

illness or delaying treatment and (b) cost management strategies emphasizing on resource mobilization, and budget adjustments (Sauerborn, Adams, & Hien, 1996). The most common financing strategies are the use of savings, sale of assets and livestock, borrowing money from friends and family, loan on interest, reduction in food consumptions and basic non-food expenditures (Bogale, Mariam, & Ali, 2005; Carrin, Gray, & Almeida, 1998; Patcharanarumol, Mills, & Tangcharoensathien, 2009; Russell, 2005; Russell, 2004; Leive & Xu, 2008; Kumar, 2015). Each of these strategies seems to affect the livelihood in the long run, and the effects vary across strategies. Empirical studies have discovered that the households opt for the highly risky coping strategies only when no other alternatives with low risks are available (Russell, 2004; Russell, 2005; Somi, Butler, Vahid, Njau, & Abdulla, 2009). The financing mechanisms adopted by households for healthcare seem to differ across the globe. Studies have confirmed that these variations are because of factors like types of ailments, type of healthcare provider (public or private), the economic condition of the patients (Engelgau, Karan, & Mahal, 2012; Huffman, et al., 2011; Alamgir, Naheed, & Luby, 2010; Ezeoke, Onwujekwe, & Uzochukwu, 2012; Steinhardt, et al., 2009; Leive & Xu, 2008; Nguyen, et al., 2012; Ranson, Jayaswal, & Mills, 2012; Kruk, Goldmann, & Galea, 2009). A detailed understanding of financing behavior for healthcare can provide significant insight into the households' response to illness or poor health conditions. In light of the wide variation in coping strategies for healthcare shocks, a country-specific study of these financing patterns can help in developing customized health policies and improving the financing system to make healthcare more easily accessible and affordable.

2.2.3. Healthcare Expenses and its consequences:

The OOP health expenses have an inverse relation with access to health care in terms of affordability. This relation further extends to an individual's financial security as the relationship between poverty and health care access is cyclical, where poverty leads to ill health and ill health further maintains the poverty all along (Wagstaff, 2002). The OOP health expenses have the potential to bring down havoc for the households with financial hardships. Studies have revealed that throughout the world, around 44 million households have to face catastrophic expenditures in a year, and approximately 25 million households are pushed into poverty due to OOP expenses (Xu, et al., 2007). Impact of OOP expenses goes even further; high health expenses tend to force poor to withdraw from utilizing the health care services as they can't afford direct costs (consultation fees, cost of medicine

and diagnostic test) and indirect costs (transportation costs, etc.) of treatments. The OOP payment is even referred to as the most unequal and inefficient way of healthcare financing (Correa-Burrows, 2012).

The financial risk associated with poor health conditions is quantified by means of catastrophic health expenditure and the risk grows even higher if medical expenses result in the impoverishment of the households. According to Xu, et al. (2003) three factors have to act in unison for the incidence of catastrophic payments, i.e., out-of-pocket payments in the available health services, low households' capacity to pay, and a dearth of prepayment mechanisms for risk pooling. Catastrophic health expenditure is defined as the out-of-pocket spending on health care, exceeding a certain proportion of a household's income followed up by the consequence of households suffering from the burden of diseases (Ekman, 2004). On the other hand, if the health expenses of a household push it below the poverty line, then it is said that the household has been impoverished by medical expenses (Xu, 2005). Incidence of catastrophic and impoverishing health expenditures are strongly associated with OOP health expenses and are exclusively used as indicators to measure the extent to which OOP expenses consume a household's financial resources. The incidence of catastrophic health expenditure is witnessed across the globe in all developed, underdeveloped, and developing countries with different intensities (Xu, et al., 2007). But the extent of such occurrence is very high in the second and third world countries. Health financing requirements depend on several factors that vary from country to country and hence every country needs a customized health financing strategy to address the existing gap. Several attempts have been made to identify the key factor liable for the occurrence of catastrophic health care expenses and studies have been carried out as well (Table 7). Previous studies have established that factors influencing a household's health expenses to turn into catastrophes vary widely across several categories. While on one hand, there is a set of variables that is almost constant across any country or geographic settings; on the other hand, studies have also identified many region-specific factors too which are very diverse in nature.

Even after the implementation of several initiatives at both the central and regional levels, OOP is a burning issue in India as well. The repercussions of OOP health are found to be devastating as estimates show that high OOP pushed 3.5 percent (50.6 million) people below the poverty line, and the poor are farther pushed into the poverty cycle (Hooda, 2017). To adequately address the issue of financial protection against

health care costs, it is very much essential to estimate average household out-of-pocket health expenses, and identify the factors more likely to increase the financial risk for the households. An investigation of the various consequences of healthcare expenses on the families' overall well-being can provide insights on the extent disruption caused by high costs of treatments.

Table 7: Factors Responsible for causing Catastrophic Health Care Expenditures at the household level

Study Area	Author(s)	Identified Responsible Factors
Myanmar	Myint, Pavlova, & Groot (2019)	- Geographical location of the households' - Gender of the household head - Total number of household members - Number of children under 5 - Number of disabled persons in the household
Vietnam	Kien, et al., (2016)	- Poor households with member(s) suffering from non-communicable diseases - Poor households with members above the age of 60 years - Households from the slum areas
	Minh, et al., (2013)	- Households with aged members - Households from the rural area
Korea	Choi, et al., (2015)	- Low economic status of households - Presence of elderly household member - Presence of chronic disease in a household
Nepal	Ghimire, Ayer, & Kondo (2018)	- Low economic status of households - Presence of elderly household member - Presence of chronic disease in a household
China	Li, et al. (2012)	- Need for and use of health care - Demographics - Type of benefit package - Type of provider payment method
Turkey	Yardim, Cilingiroglu, & Yardim (2010)	- Rural urban disparity - Presence of elderly household members - Presence of preschool child in household
Kenya (slum areas)	(Buigut, Ettarh, & Amendah, 2015)	- Number of working adults in a household - Membership in a social safety net type of healthcare provider visited
Sri-Lanka	Amaya-Lara (2016)	- Extended and nuclear families from rural areas - Households with children or elderly adults - Households without any insurance coverage

Source: Compiled by the Author

2.2.4. Healthcare Expenses and financial protection:

Studies suggest that a health system can provide better protection against the unforeseen health risks with the revenues collected through different types of

prepayments like compulsory/voluntary insurance premiums, health-taxes, etc. (Saksena, Hsu, & Evans, 2014; Moreno-Serra, Millett, & Smith, 2011). Among the several revenue sources, insurance premiums or taxes are more efficient and progressive than OOP spending.

Evidence from available literature proves the potential of health insurance schemes at several fronts. The studies have claimed that health insurance can increase access and reduce catastrophic OOP expenses (Escobar, Griffin, & Shaw, 2011). From the systematic review of sixty-eight full-length research articles, Erlangga, Suhrcke, Bloor, and Ali (2019) reported that with increased insurance coverage access to healthcare, protection against financial risks, as well as health conditions have improved in low-and-middle-income countries (LMICs). Based on a household survey in Vietnam, Nguyen, et al. (2012) claimed that the insurance reform has been able to reduce the households' vulnerability to high treatment costs by reducing both direct and indirect costs. The nationally representative cross-sectional study has also identified a positive impact in term of financial protection from the social health insurance schemes of China (Chen, et al., 2017).

Following the global evidences on health insurance as an efficient solution to the health expense issue (Zhao, et al., 2019; Navarrete, 2018; Mekonen, Gebregziabher, & Teferra, 2018; Kusi, Hansen, Asante, & Enemark, 2015), one can clearly expect that it can provide financial security against the health risk to a certain extent in Indian settings also (Pandey, Ploubidis, Clarke, & Dandona, 2017). Even studies from certain parts of the country have found health insurance to be effective in improving financial security in India as well (Devadasan, Criel, Damme, Ranson, & Stuyft, 2007; Panda, Chakraborty, Dror, & Bedi, 2014; Sood, et al., 2014). Over the years, the Indian government also has been promoting health insurance as a key to improve financial security against healthcare risks. Several publicly financed health schemes to provide financial assistance have been launched at the state, as well as at the national level through the public-private partnership (PPP) model. But the assessment reports of these schemes on the front of providing financial security healthcare costs have provided diverse outcomes (Acharya, et al., 2012). Significantly these government-funded policies are pro-poor focused. Apart from the publicly funded health insurance schemes, several other health insurance schemes are operating under General Insurance Corporations (GIC), Life Insurance Corporations (LIC), and other private insurance providers. Mathiyazhagan (2018) has mentioned that

the distributions of these schemes are regressive as they are often biased towards the salaried, wealthy peoples, and mostly urban-centric. As a result, the majority of the Indian population residing in rural areas remained deprived of the benefits of these health insurance policies. With more of these insurance schemes, there is a chance to improve financial security against health risks at the household level. But it is not possible to introduce numerous fully-government funded policies currently due to the country's fiscal constraints. So, the financial security scenario is still pretty weak in the country, and the need for new financing measures/scheme(s) is quite evident in the recent times.

2.3. Research Gap:

Academicians and policymakers have explored out-of-pocket health expenditures from several standpoints till date. Healthcare expenses and financing are a country-specific issue, and as discussed in the previous section (section 2.2), several academicians have also investigated the matter in the context of India. But, compared to the number of studies focusing on the out-of-pocket healthcare expenses in India, only a few recent studies focus on household healthcare spending, distinctively differentiating between the cost of treatment in public and private facilities. The NSSO 72nd rounds have listed out the primary coping strategies adopted by the Indian people to pay their medical bills by collecting data at the household level. However, the list is not entirely exhaustive, and there are no significant studies found that further explored the impact of these coping mechanisms in depth. There are only a few such studies carried out for the north-eastern region of India, specifically on Assam. For instance, Basumatary (2018) concentrated his doctoral study on healthcare spending by rural households on public services and kept it geographically confined to the Chirang district only. Bhuyan (2017) on the other hand, assessed the financial security scenario of the organized and unorganized sector workers of Guwahati city in light of the health insurance policies. On the other hand, Gogoi (2013) analyzed the overall health security situation of the Lakhimpur district of Assam in light of political economics. Most of the above-mentioned doctoral-level studies solely focused on one aspect of this issue rather than attempting to capture an overall view of the existing situation.

The existing studies have mostly estimated the OOP health expense at the household or individual level. But considering the impact of provider selection on the amount of OOP expenses, as observed from the existing literature, it is essential to

investigate the distribution of these healthcare costs across both types of providers available in the state.

In addition to that, most researchers have quantified the impact of OOP health expenses through financial catastrophe and impoverishment estimation. Both approaches can capture the extreme repercussions of high healthcare costs only. But it can't provide better insights into the hardships that the families have to endure while coping with these financial hazards. We have not come across any study that has incorporated the individuals or households' perceptions about their annual healthcare expenses and the consequences they faced because of it.

In this thesis, apart from the approximation of annual OOP health expenditures at the household level, we have also analyzed the distribution of expenses among the two sectors. The primary aim of this study is to identify the significant variables in determining the extent of households' OOP expenses. The study also focused on drawing a comprehensive overview of the financing pattern adopted by the families and the reasons behind it. We have quantified the impact of high OOP expenses in terms of the incidence of catastrophic health expenses. We have also incorporated the households' outlook on these costs and consequences to capture the complete essence of the situation. The present study seeks solutions to improve the financial protection scenario by minimizing OOP expenses. The study aims to propose suggestions to provide financing alternatives to make healthcare easily accessible and more

affordable.

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