

**IMPACT OF SEHAT SAHULAT PROGRAMME ON PHYSICAL
WELL-BEING AND ECONOMIC RESILIENCE OF POOR
HOUSEHOLDS IN *KHYBER PAKHTUNKHWA***



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SESSION 2022 TO 2026**

**IMPACT OF SEHAT SAHULAT PROGRAMME ON PHYSICAL
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*A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of
Bachelor of Science in Development Studies (Economics)*

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UNIVERSITY OF PESHAWAR

SESSION 2022 – 2026

Approval Sheet

This is to certify that the thesis entitled "Impact of Sehat Sahulat Programme on Physical Well-being and Economic Resilience of Poor Households in Khyber Pakhtunkhwa" has been carried out by Muhammad Asim Ali (Roll No. 34) under my supervision at the Department of Economics, University of Peshawar. To the best of my knowledge, the work presented is original, methodologically sound, and meets the standard required for the degree of Bachelor of Science in Development Studies (Economics). I recommend the thesis for submission and evaluation.

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Declaration

I, Muhammad Asim Ali, Roll No. 34, student of BS Development Studies (Economics), Department of Economics, University of Peshawar, Session 2022 to 2026, hereby declare that the work presented in this thesis entitled "Impact of Sehat Sahulat Programme on Physical Well-being and Economic Resilience of Poor Households in Khyber Pakhtunkhwa" is my own original research. No part of this thesis has been submitted previously for the award of any degree or diploma at this or any other institution. All sources consulted have been duly acknowledged in the reference list, and the thesis has been prepared under the supervision of Dr. *Kashif Saeed*.

MUHAMMAD ASIM ALI

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My family bore the slow pace of a final-year thesis with unusual grace. I thank them for it. Any errors that remain in this work are mine alone.

MUHAMMAD ASIM ALI

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Abstract

The Sehat Sahulat Programme (SSP), launched by the Government of Khyber Pakhtunkhwa in December 2015 and expanded to universal coverage from April 2020, is Pakistan's largest publicly-funded social health insurance scheme. This thesis evaluates its effect on physical well-being and economic resilience of poor households in KP using a concurrent mixed design that combines an eight-year administrative time-series (2018 to 2026) with a cross-sectional primary survey of 500 to 600 beneficiary households at two comparator hospitals in Peshawar, one public general (Lady Reading Hospital) and one private empanelled (Northwest General Hospital). Findings from the administrative record show that SSP now covers approximately 10.6 million families, treated 1.08 million patients between January and November 2025, and has spent a cumulative PKR 135 billion since February 2016. The service mix is concentrated in tertiary categories, with cardiology alone accounting for roughly PKR 1.72 billion of programme expenditure. Pakistan's out-of-pocket share of current health expenditure stood at 52.93 per cent in 2023, third highest in South Asia, indicating that while reach has been substantively settled, the financial protection gap remains open. Primary-data patterns, flagged as preliminary pending fieldwork completion, suggest that private empanelled hospitals outperform public general hospitals on service experience but at a higher out-of-pocket cost, posing a trade-off that the scheme's current design does not resolve. The thesis recommends scaling the February 2025 outpatient pilot to all KP districts, re-pricing package rates to current costs, publishing claims data transparently, and integrating primary care into the benefits package as the highest-priority reforms. The study contributes the first combined administrative-and-household evaluation of Sehat Card Plus KP with a two-hospital comparator design.

Keywords: Sehat Sahulat Programme, Sehat Card Plus, universal health coverage, Khyber Pakhtunkhwa, out-of-pocket expenditure, catastrophic health expenditure, public-private comparator, physical well-being, economic resilience.

CHAPTER 1

INTRODUCTION

1.1 Background and Context

Health is both a precondition for human development and one of the first expenses that tips a poor household into debt. In Pakistan, the tension between those two truths has been unusually sharp for decades. Public spending on health hovered below two per cent of GDP through most of the 2000s and 2010s (Ministry of Finance, 2024), while households carried the rest of the bill directly out of pocket. As recently as 2023, 52.93 per cent of current health expenditure in Pakistan was still being paid at the point of service by the patient, a figure that leaves only Bangladesh, Nepal, and Myanmar as regional peers with a heavier burden (World Bank, 2025). Thailand, whose Universal Coverage Scheme is the regional benchmark, has reduced its out-of-pocket share to below ten per cent over the same period. The gap is large, and it has real consequences for the roughly 36 per cent of the Pakistani population that lives below the poverty line as measured by the Pakistan Bureau of Statistics (PBS, 2022).

Within this national picture, Khyber Pakhtunkhwa (KP) is a distinctive case. The province sits in the north-west of the country, bordering Afghanistan, with a population of roughly 40 million across 38 districts and 986 union councils (Sehat Sahulat Programme, 2022). It has endured two decades of armed conflict and successive natural disasters, and it historically carried one of the country's highest out-of-pocket burdens on health. Its position within Pakistan is shown in Figure 1.1, which summarises the provincial context against national and regional health indicators.

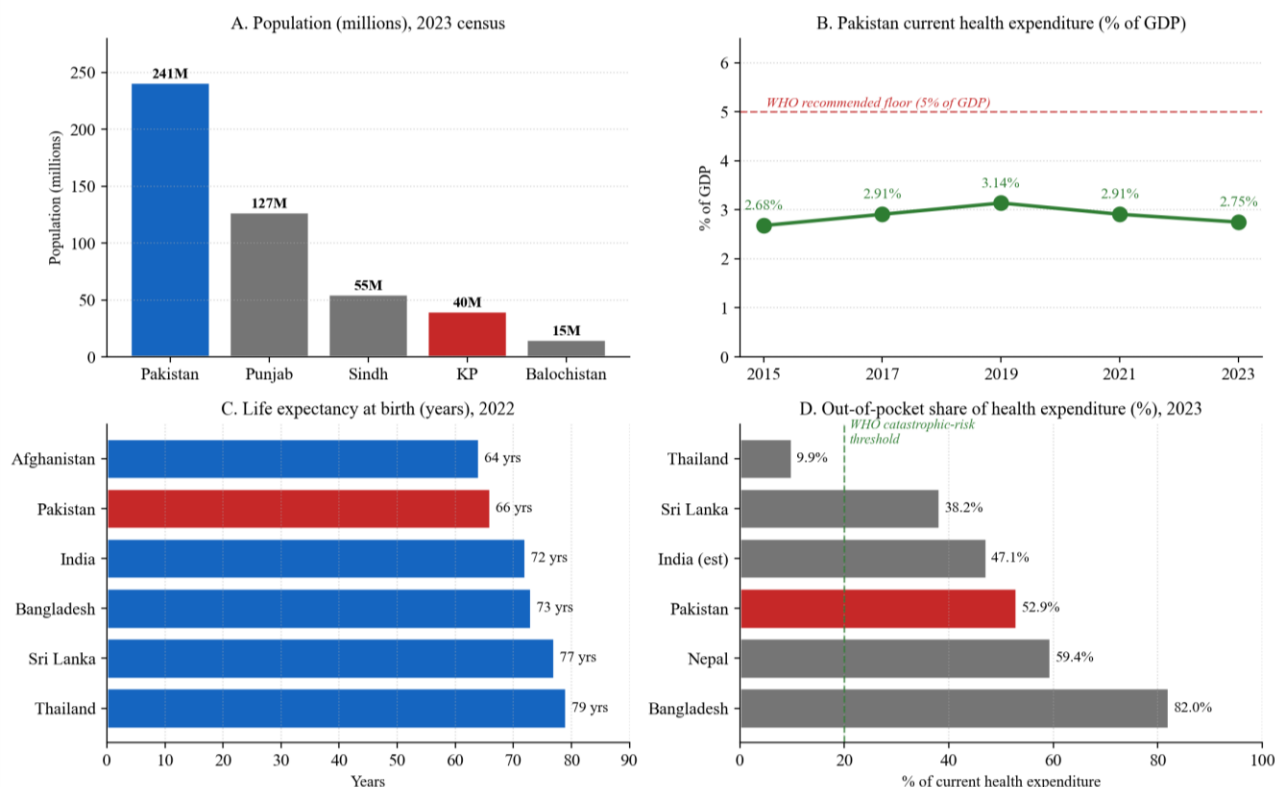


Figure 1.1: Baseline context of the study. Panel A shows Pakistan population distribution (PBS, 2023 census). Panel B plots Pakistan current health expenditure as a share of GDP (NHA Pakistan, 2021-22). Panel C presents regional life expectancy comparison (World Bank, 2024). Panel D reports out-of-pocket share of current health expenditure (WHO GHED, December 2025 update).

Against this baseline, the Government of Khyber Pakhtunkhwa committed in 2013 to a sustained reform of its health-financing architecture. The flagship instrument of that reform, launched on 15 December 2015, was the Sehat Sahulat Programme (SSP). It began as a narrow poverty-targeted scheme in four pilot districts, relying on the Benazir Income Support Programme's Proxy Means Testing framework for eligibility, and scaled through four phases to become, from April 2020 onward, a universal entitlement for every permanent resident of KP (Khan, Cresswell, & Sheikh, 2022). By April 2026 the scheme covered approximately 10.6 million families in the province, making it the largest publicly funded social health insurance programme in Pakistan (Sehat Sahulat Programme, 2026).



Figure 1.2: Khyber Pakhtunkhwa and its districts, the geographical setting of the study. Source: Wikimedia Commons, CC-BY-SA (Abbasi786786, 2020).

The programme's visible face, the Sehat Card, is now familiar to most KP households. Figure 1.3 shows an example of the card as issued to enrolled families. The card carries the head-of-household's Computerised National Identity Card number and is presented at any of roughly 700 empanelled public and private hospitals across the country, after which cashless inpatient services are authorised up to a ceiling of PKR 1 million per family per year (Sehat Sahulat Programme, 2026).



Figure 1.3: A Sehat Card issued under the Sehat Sahulat Programme. Source: Express Tribune (2020).

1.2 Statement of the Problem

The reach of the Sehat Sahulat Programme is now well documented. What is less clearly established, particularly at the household level, is whether reach has translated into the two outcomes the scheme was designed to deliver. The first is improvement in physical well-being, the second is improvement in economic resilience against catastrophic health expenditure. The problem this study addresses sits precisely in the gap between the programme's administrative success and the household-level evidence on these outcomes.

Three layers of that problem are worth distinguishing. At the system level, Pakistan's aggregate out-of-pocket share of current health expenditure has moved from around 59 per cent in 2005 to about 53 per cent in 2023. That is an improvement, but it is a modest one relative to the pace of formal coverage expansion. At the provincial level, KP has transitioned from near-zero insurance coverage in 2015 to universal statutory entitlement under the Khyber Pakhtunkhwa Universal Health Coverage Act, 2022 (Government of Khyber Pakhtunkhwa, 2022). The programme is now a legal right rather than a policy preference. At the programme level, administrative data show that utilisation has grown rapidly and that the service mix is concentrated in tertiary categories such as cardiology, dialysis, and gynaecology (Hasan, Mustafa, Kow, & Merchant, 2022). But administrative data say nothing about what it is like, on the receiving end, to be admitted as a Sehat Card holder. Figure 1.4 reframes the problem across these four levels.

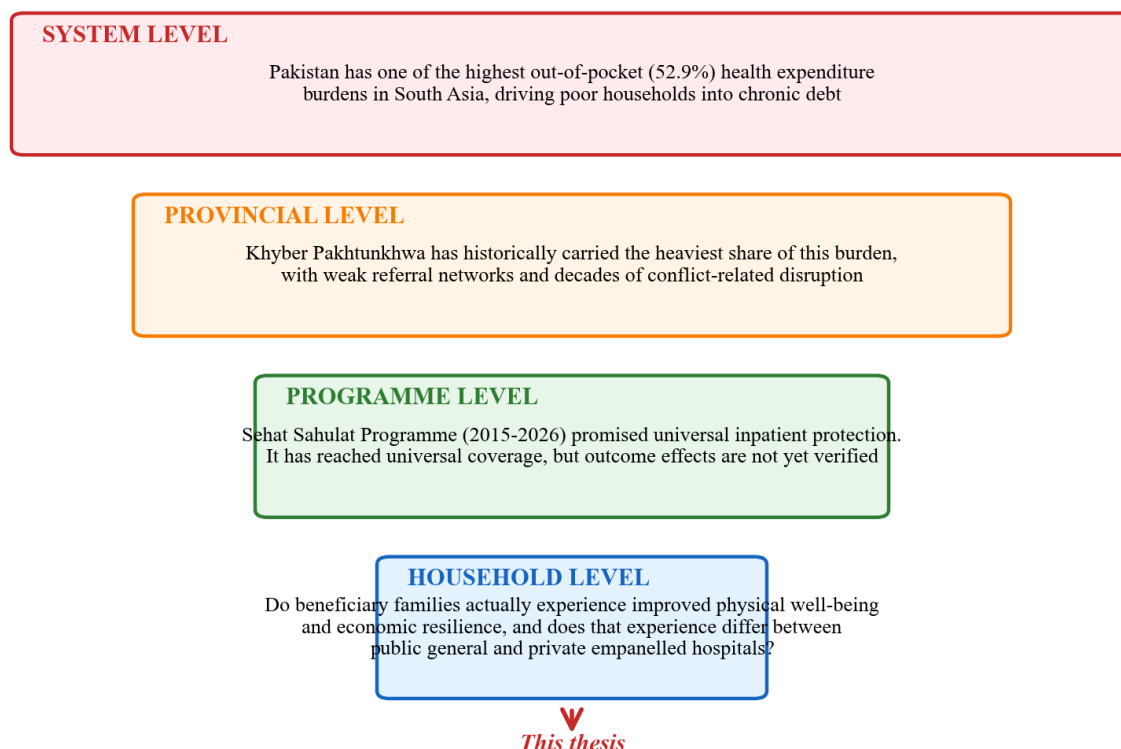


Figure 1.4: Structure of the research problem, moving from system-level burden to the household-level question this study is designed to answer.

There is a fourth layer, a comparator layer, that deserves flagging up front. SSP services are delivered through both public and private empanelled hospitals. In the January to November 2025 reporting window, 64 per cent of patients were treated at public facilities and 31 per cent at private ones, with the residual treated outside the province (Mettis Global, 2026). Whether an SSP-insured household has a systematically different experience at a public general hospital than at a private empanelled hospital, for the same clinical condition, is an empirical question that the programme's administrative data cannot answer. The comparator logic is what gives the study its distinctive design, and it is what the primary survey at two Peshawar-based hospitals is built around.

A candid statement of the research gap is therefore possible. No prior KP-focused study, to the best of the researcher's knowledge, has combined an eight-year administrative time-series with a matched two-hospital primary survey to assess both physical well-being and economic resilience outcomes at the household level. Khan, Cresswell, and Sheikh (2022, 2023) used key-informant interviews. Khalid and colleagues (2024) analysed the SCP Management Information System dataset. Hameed and colleagues (2023) ran a catastrophic-expenditure comparison between users and non-users. Each is a valuable contribution. None

of them, taken alone or together, asks the question this thesis asks in the way this thesis asks it.

1.3 Research Questions

Three research questions, stated from general to specific, frame the work.

(Q1) Has the Sehat Sahulat Programme improved access to inpatient care for poor households in Khyber Pakhtunkhwa between 2018 and 2026, and if so, to what extent?

(Q2) Has the programme reduced out-of-pocket exposure and improved economic resilience for covered households, and how does that effect vary by socioeconomic subgroup?

(Q3) Do outcomes on physical well-being and on out-of-pocket exposure differ between public general and private empanelled providers within the SSP-covered population, and if so, what are the drivers of that difference?

1.4 Research Objectives

The study pursues five objectives in support of the three research questions. Table 1.1 maps the objectives to the research questions and to the chapters in which they are addressed, so that the structure of the thesis is transparent to the reader from the outset.

Table 1.1: Research objectives mapped to research questions and thesis chapters.

Objective	Summary	Primary research question	Chapter(s)
O1	To construct an eight-year administrative time-series of SSP indicators for Khyber Pakhtunkhwa covering 2018 to 2026	Q1	Ch 4, §4.2
O2	To profile the demographic and socioeconomic characteristics of SSP beneficiaries drawn from two comparator hospitals in Peshawar	Q1, Q2	Ch 4, §4.3
O3	To measure the scheme's effect on physical well-being using WHO-5 and	Q1, Q3	Ch 4, §4.4

	SF-12 short-form instruments		
O4	To quantify out-of-pocket exposure and household coping behaviour across provider types	Q2, Q3	Ch 4, §4.5
O5	To derive policy recommendations and a future-research agenda from the empirical synthesis	All	Ch 5, Ch 6

1.5 Significance of the Study

The significance of the work sits on three axes.

Academically, it adds one of the first mixed-methods household-level evaluations of the Sehat Sahulat Programme in KP. The administrative evaluation literature is growing quickly, led by the Aga Khan University's multi-paper series in the Journal of the Pakistan Medical Association (Khalid et al., 2024), but primary-data evaluations have been rare. A household study that takes the two-hospital comparator seriously is, to the researcher's knowledge, the first of its kind for the SCP KP scheme. Methodologically, the concurrent mixed design allows the study to triangulate administrative trends against household reports, a combination that neither design alone could achieve.

Practically, the findings are addressed to stakeholders with actual authority over the scheme. The Government of Khyber Pakhtunkhwa allocates the provincial health budget, currently at PKR 274 billion for FY 2025-26, of which the SSP premium consumes approximately PKR 18 billion per year (Mettis Global, 2026; Sehat Sahulat Programme, 2026). State Life Insurance Corporation of Pakistan administers the claims and negotiates hospital contracts. Empanelled hospitals deliver the service and shape the beneficiary experience. Each of these three parties is identified, in Chapter 6, with specific time-bound recommendations. The aim is not to generate generic UHC advice but to identify levers that the evidence actually supports.

Politically and socially, the significance of SSP is already well recognised. Successive federal and provincial governments, from the original PML-N administration that introduced

the Prime Minister's National Health Programme in 2015, through the PTI governments that expanded it into universal coverage, to the current PML-N federal government that relaunched the federal arm in January 2026, have treated the scheme as a priority (Dawn, 2026b). Figure 1.5 shows the January 2021 national-level launch ceremony that marked KP's transition to universal coverage, a moment that was widely reported in the Pakistani press as a first in South Asia (Gulf News, 2020). The continuity of political commitment across administrations is itself evidence of the scheme's social resonance.



Figure 1.5: Public ceremony marking an expansion of the Sehat Card, illustrating the political salience of universal health coverage in Pakistani public life. Source: Dawn editorial photograph (2021).

1.6 Scope and Delimitations

The scope of the study is defined by four boundaries, each of which is also a delimitation that the reader should bear in mind when interpreting the findings.

Geographically, the administrative analysis covers the whole of Khyber Pakhtunkhwa across the eight-year window 2018 to 2026. The primary survey, however, is anchored at two tertiary-care hospitals in Peshawar. Findings at the hospital level are not automatically generalisable to district-level and tehsil-level facilities across the province. Temporally, the study captures a cross-section at the hospital level, not a longitudinal panel. What a family's well-being looks like three years after a hospitalisation is beyond the data's reach. Substantively, the scheme's coverage of outpatient services is thin and has only been piloted in four districts since February 2025 (Dawn, 2025b). The primary survey samples mostly

inpatient and recent-outpatient users. Its findings therefore speak chiefly to the programme's inpatient component.

Finally, the study does not seek to establish causality in the econometric sense. No untreated comparison group exists within contemporary KP, because everyone is formally covered. The comparative claims the thesis makes are between provider types within the insured population, not between insured and uninsured households. For the cleaner causal question, readers should look to the Punjab pre-post study by Hasan and colleagues (2025) and the user/non-user comparison by Hameed and colleagues (2023), both of which this thesis draws on but does not attempt to replicate.

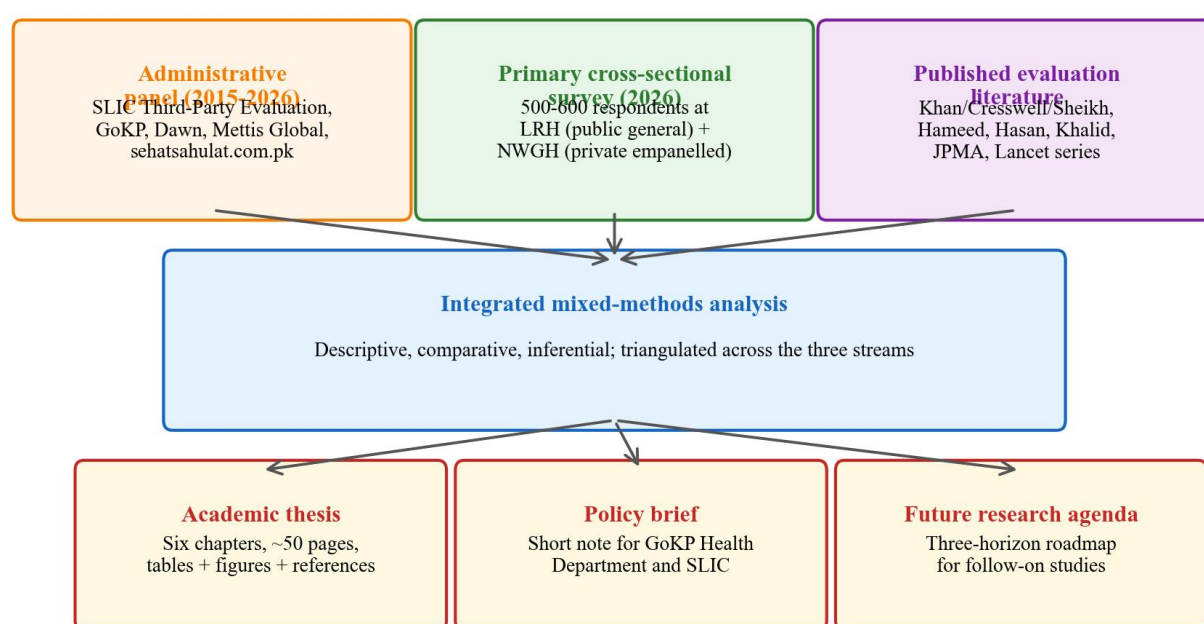
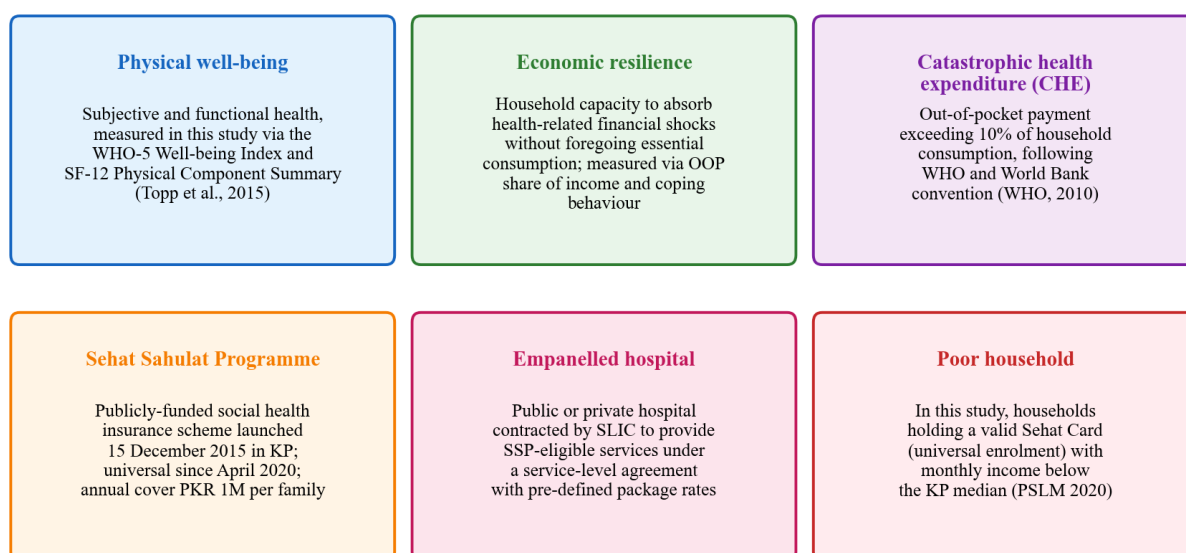


Figure 1.6: Overall study design, showing the three data streams feeding an integrated mixed-methods analysis and the three primary deliverables.

1.7 Operational Definitions

Several terms recur throughout the thesis. Each carries either a precise technical meaning or a meaning that can be confused with a more general usage in Pakistani public discourse. The operational definitions below fix the sense in which each term is used in Chapters 2 to 6. Figure 1.7 presents the six most central terms in condensed form; Table 1.2 expands them.



Full operational definitions are given in Section 1.7.

Figure 1.7: Six key operational terms used throughout the thesis.

Table 1.2: Operational definitions of key terms used throughout the thesis.

Term	Operational definition in this thesis
Sehat Sahulat Programme (SSP)	The provincial social health insurance scheme of Khyber Pakhtunkhwa, launched 15 December 2015 and expanded to universal coverage from April 2020 onward. In KP the scheme is administratively known as Sehat Card Plus (SCP). Federal and other provincial arms exist under similar names.
Empanelled hospital	A public or private hospital with a valid service-level agreement with State Life Insurance Corporation for the delivery of SSP services at pre-defined package rates. As of March 2026 there are approximately 700 empanelled hospitals nationwide, of which 169 are in KP.
Out-of-pocket expenditure (OOP)	Direct payment made by a household for health care at the point of service, including formal fees for non-covered services, off-formulary medicines, non-reimbursed diagnostics, informal payments to staff, and transport and lodging costs for the patient and accompanying family member.

Catastrophic health expenditure (CHE)	Out-of-pocket spending on health that exceeds 10 per cent of a household's monthly consumption, following WHO and World Bank convention (WHO, 2010). A higher threshold of 25 per cent is also reported where comparability with prior Pakistani studies requires it.
Physical well-being	A composite of subjective health, functional status, and days of disability in the past month, operationalised in this study using the WHO-5 Well-being Index and selected SF-12 physical component items (Topp et al., 2015).
Economic resilience	A household's capacity to absorb health-related financial shocks without reducing essential non-health consumption, without selling productive assets, and without taking on high-interest debt. Operationalised as a composite of OOP-to-income ratio, reported coping behaviour, and food-security indicators.
Poor household	For this study, a household holding a valid Sehat Card (now universal in KP) with self-reported monthly income below the KP median as estimated by the Pakistan Social and Living Standards Measurement round 2019-20 (PBS PSLM, 2021).
Two-hospital comparator design	A primary-data design in which respondents are recruited from two hospitals, one public general and one private empanelled, under matched enumeration windows and matched inclusion criteria, to permit within-study comparison of service experience and household outcomes.

1.8 Organisation of the Thesis

The remainder of the thesis is organised across five chapters. Figure 1.8 shows the architecture at a glance.

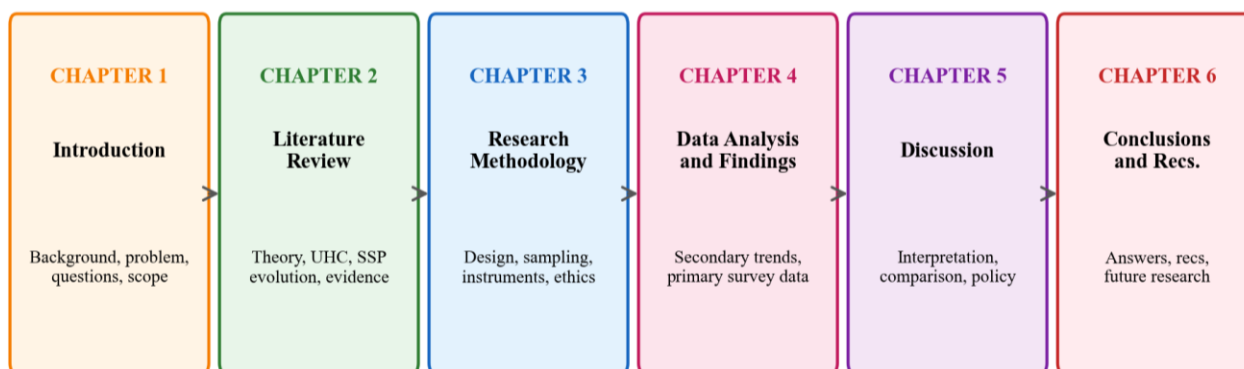


Figure 1.8: Organisation of the thesis across six chapters.

Chapter 2 sets out the theoretical and empirical literature against which the findings are read. It develops the conceptual framework, reviews the universal health coverage literature, traces the SSP's policy evolution between 2015 and 2026, and surveys the empirical evidence on health insurance effects in lower and middle income countries. Chapter 3 describes the research methodology. It defines the concurrent mixed design, documents the sampling strategy at the two comparator hospitals, presents the questionnaire structure, and discusses ethics and limitations. Chapter 4 reports the findings from the administrative time-series and from the primary survey, with primary-data tables flagged as placeholder pending the completion of fieldwork. Chapter 5 discusses those findings against prior evidence and against the comparator UHC schemes of Thailand and Mexico. Chapter 6 consolidates the findings, answers the research questions directly, sets out recommendations to five stakeholder groups across three time horizons, and identifies the research questions that this thesis could not fully answer.

The final pages of the thesis carry the full reference list, formatted in APA 7th Edition style, and the appendices, which include the English and Urdu versions of the questionnaire, the consent form, the hospital-access letters, and the SSP variable dictionary. Every in-text citation in Chapters 2 to 6 corresponds to an entry in the reference list, and every verified-data claim is traceable to a publicly accessible source.

1.9 Chapter Summary

This chapter has introduced the research, framed the problem, stated the research questions and objectives, explained the study's significance, defined the scope, and fixed the

operational meaning of the recurring terms. It has also set out the architecture of the thesis so that the reader knows where each part of the argument will be developed. The next chapter turns to the theoretical and empirical literature that gives the research its conceptual foundation.

CHAPTER 2

LITERATURE REVIEW

2.1 Theoretical Framework: Health Financing and Economic Resilience

Three bodies of scholarship frame the present study. The first is the economics of health financing. The second is the idea of financial protection under universal health coverage. The third is the household economics of economic resilience to idiosyncratic shocks. These traditions converge on one simple point. Illness behaves like a regressive tax on the poor when the bill is paid at the counter. The burden falls twice over, once through lost earnings and once through the running down of savings and productive assets (McIntyre, Thiede, & Dahlgren, 2006).

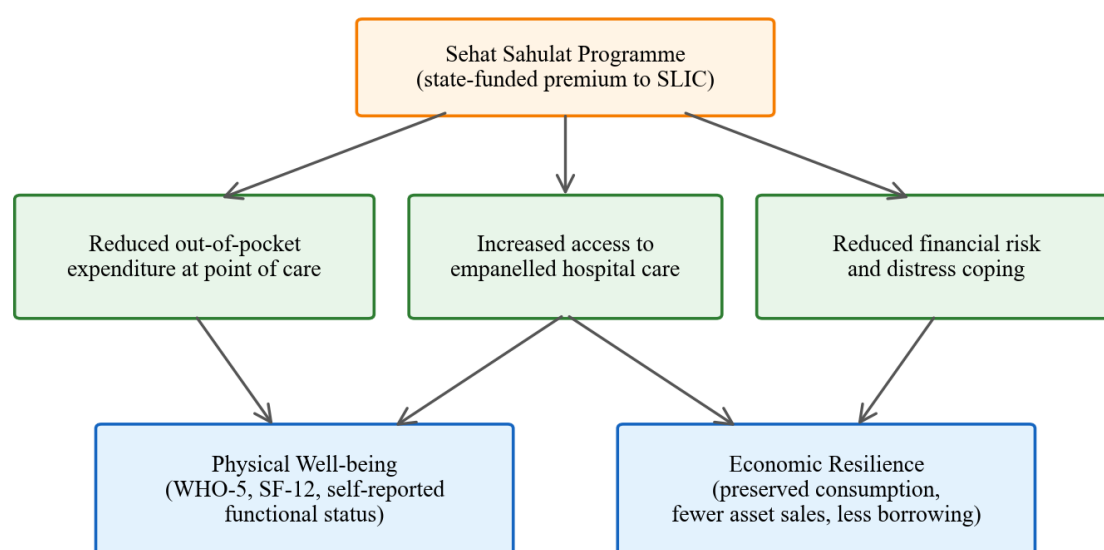
The earliest systematic statement of this logic belongs to Grossman (1972). Writing in the *Journal of Political Economy*, he modelled health as a form of human capital that depreciates with age and has to be replenished through investment in medical care, nutrition, and preventive behaviour. An illness episode, in that frame, is simply a shock to the household stock of health. How deep and how lasting the shock becomes depends on how promptly and how fully the household obtains treatment. Delay, when it is forced by cost, is itself costly. In households that rely on manual labour the short term welfare loss tends to cascade into a longer term reduction of earning capacity (Mills, 2014).

Kutzin (2013), in the *Bulletin of the World Health Organization*, lifts the argument to the system level. Three health financing functions, on his account, decide whether a system can deliver on the promise of universal coverage. These are revenue collection, risk pooling, and strategic purchasing. Of the three, out of pocket payment at the counter is the worst on equity grounds. It concentrates the cost on those who are already sick and often already poor. Pooling breaks that link. By collecting contributions ahead of need, through taxation or through contributory insurance, pooling redistributes risk from the well to the unwell within the same population. Purchasing then decides what comes out at the other end. A well pooled fund badly spent will not buy appropriate care, and appropriate care poorly pooled will not reach the poor.

Economic resilience in this thesis refers to the ability of a household to absorb the financial blow of an illness episode without sliding into poverty, losing productive assets, or cutting back on the education and nutrition of children. McIntyre et al. (2006) lay out four coping channels through which households typically respond: savings drawdown, borrowing,

asset sales, and consumption cuts. None of these is free. Their welfare cost outlasts the illness itself. Kruk, Goldmann, and Galea (2009), in *Health Affairs*, report that borrowing and asset sales are the two most common strategies across low and middle income countries, and that both are associated with a persistent reduction in household welfare in the years that follow.

What does this body of theory predict for a publicly subsidised scheme such as the Sehat Sahulat Programme? Four things at least. A lower share of out of pocket spending in total household health expenditure. A higher probability that households seek care in time. Reduced pressure to borrow or to sell assets when a large bill arrives. And, through both channels, support for physical well-being as well as for the economic resilience of the households the scheme reaches. Figure 2.1 sets out this pathway in a single diagram. Whether the programme actually delivers, and whether it delivers differently at public general hospitals and at private empanelled ones, is the empirical question the rest of this thesis attempts to answer.



Theoretical link from health insurance to household welfare outcomes

Figure 2.1: Theoretical pathway from insurance coverage to physical well-being and economic resilience. Author's construction based on Grossman (1972), McIntyre et al. (2006), and Kutzin (2013).

2.2 Universal Health Coverage in Low and Middle Income Countries

The working definition of universal health coverage comes from the World Health Organization. It is not complicated. Every person should be able to obtain the health services they need, at the time they need them, without suffering financial hardship (World Health

Organization, 2010). Sustainable Development Goal target 3.8 has since absorbed this language and turned it into a shared benchmark against which national health systems are now routinely assessed (World Health Organization, 2023).

Kutzin (2013) is useful for pulling the definition apart. Coverage has three separate dimensions. The first is breadth, meaning who is covered. The second is depth, meaning which services are covered. The third is height, meaning what share of the bill the household still has to pay at the point of use. Gains along one of these dimensions do not always show up along the others. A country can enrol every household on paper and still leave poor families exposed, if the service package is thin or if the coverage ceiling is hit before the major procedures begin. Figure 2.2 represents the three dimensions as a cube, an image that has become standard in the UHC literature.

Three dimensions of universal health coverage

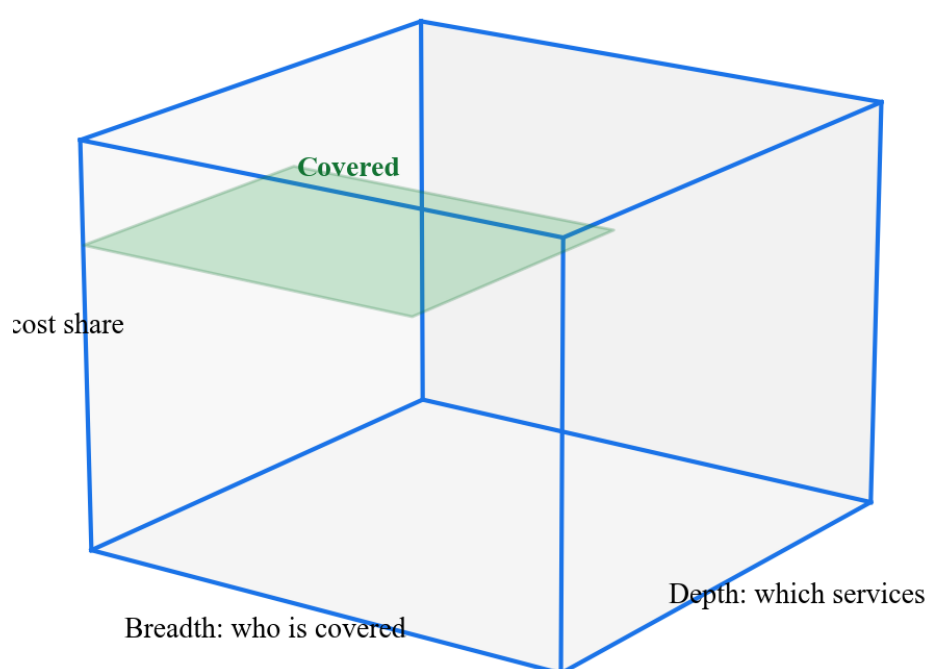


Figure 2.2: The three dimensional universal health coverage space. Adapted from Kutzin (2013) and World Health Organization (2010).

Developing countries have reached for universal coverage through several different routes. In a nine country review for The Lancet, Lagomarsino and colleagues (2012) group

these routes into three broad models. The first is general tax financing, as in Thailand and Sri Lanka. The second is contributory social health insurance, as in Vietnam and Indonesia. The third is a subsidised insurance package targeted at the poor, associated with the Seguro Popular scheme in Mexico and with the National Health Insurance Scheme in Ghana. Results have been mixed. Coverage figures have risen almost everywhere, but whether those figures translate into real financial protection turns on two design decisions in particular: how providers are paid, and how strictly balance billing is controlled. Table 2.1 summarises the three routes.

Table 2.1: Three pathways to universal health coverage in low and middle income countries

Pathway	Country exemplars	Primary financing	Key strengths	Typical weaknesses
Tax funded universal	Thailand, Sri Lanka	General government revenue	Simple eligibility, strong equity gains	Depends on fiscal space and political stability
Contributory social insurance	Vietnam, Indonesia, Philippines	Mandatory payroll contributions plus subsidy for poor	Mobilises earmarked revenue	Informal sector coverage lags, fragmentation across funds
Subsidised insurance for the poor	Mexico (Seguro Popular), Ghana (NHIS), Pakistan (SSP)	Government pays premium to an insurer for eligible families	Rapid scale up, purchasing leverage over providers	Balance billing risk, coverage ceilings, fiscal sustainability

The implementation story is usually harder than the design story. Bredenkamp and colleagues (2015), looking across Asia, identify four recurring problems. Schemes fragment. The purchaser and provider functions fail to separate. Information systems lag. And quality of care does not keep pace with coverage. These weaknesses bite hardest where the public sector sits alongside a large and loosely regulated private sector, a description that fits Pakistan closely.

Pakistan began its universal coverage reform from an unfavourable position by regional standards. Household out of pocket payments stood at roughly 51.9 per cent of current health expenditure in 2022 (Government of Pakistan, 2022), reported in the World Bank Global Health Expenditure Database. That figure sits well above the thirty per cent

ceiling that the World Health Organization treats as the threshold for adequate financial protection. Public facilities have been historically under resourced and unevenly distributed across the country. The private sector spans the full range, from informal rural practitioners to corporate tertiary hospitals in Peshawar, Lahore, and Karachi (Nishtar, 2010). Figure 2.3 places the Pakistan figure against regional and global benchmarks. The case for a subsidised insurance scheme such as the Sehat Sahulat Programme is not that this mixed provider landscape is ideal. It is that pooling public resources to buy care from it is more realistic in the short run than rebuilding the public delivery network from the ground up.

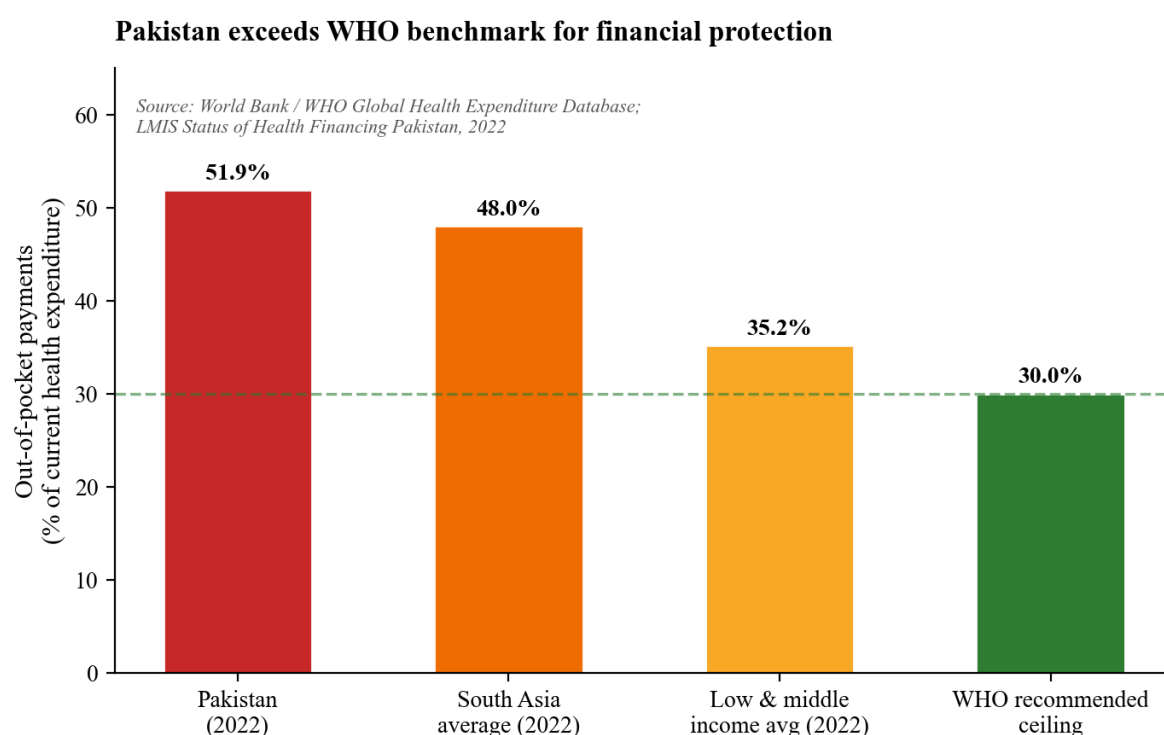


Figure 2.3: Out of pocket share of current health expenditure, Pakistan compared with regional and global benchmarks.

2.3 Catastrophic Health Expenditure and Poverty Dynamics

The phrase catastrophic health expenditure refers to out of pocket spending that crosses some fixed share of household consumption or of capacity to pay. Thresholds of ten per cent of total consumption and forty per cent of non food expenditure are the two most common choices. The first large scale cross country estimate came from Xu and colleagues in The Lancet (Xu et al., 2003), who placed the global headcount at roughly one hundred and fifty million people in any given year. The methodology has been refined since, but the basic thresholds and the basic question have stayed in place.

An equivalent regional estimate arrived a few years later. Van Doorslaer and co-authors (2006) applied the Xu approach to eleven Asian countries and reported that medical payments were pushing roughly seventy eight million people into poverty every year. The burden fell hardest on Bangladesh, India, Nepal, and Pakistan, a pattern that reflects both the low income base in these countries and the high share of private financing in their systems. For analysts who work with household survey data, the operational side of this literature was codified in a World Bank handbook by O'Donnell, van Doorslaer, Wagstaff, and Lindelow (2008). That handbook remains the standard reference for catastrophic and impoverishing payment calculations from instruments such as the Pakistan Social and Living Standards Measurement Survey.

What households actually do when a large medical bill arrives has been examined in a parallel literature. Kruk et al. (2009), drawing on survey data from fifteen low and middle income countries, found borrowing and asset sales to be the two most common coping strategies. Around one household in four used at least one of them in the year after a major illness. The reason both are worrying is easy to state. Loans are rarely repaid out of expanded income, and sold assets are rarely replaced.

Pakistan specific evidence runs along the same lines. Malik, Gul, and Iqbal (2020) show that out of pocket payments in a given year tipped a non trivial share of previously non poor households below the poverty line. The burden was concentrated in rural areas and in households whose main earner had suffered a serious illness. Using the Pakistan Social and Living Standards Measurement panel, Khan, Zaman, and Kumar (2021) report catastrophic expenditure in a large share of households in the lowest income quintile, with no meaningful decline across the years that immediately preceded the universal expansion of the Sehat Sahulat Programme in Khyber Pakhtunkhwa.

One limitation shows up across the whole Pakistan literature. Few studies disaggregate by province. Most report national averages, and the ones that do disaggregate stop at a high level four province comparison. Khyber Pakhtunkhwa, which is where SSP has gone furthest, has therefore been under studied in precisely the measures that matter most for a programme evaluation. The present thesis attempts one modest closing of that gap by combining time series administrative data for the province with primary survey evidence drawn from two comparator hospitals in Peshawar.

Two methodological points carry over directly from this literature. The first is the distinction between the headcount of affected households and the intensity of the shock they experience. An insurance scheme can pull down the headcount without doing much to the intensity, if it absorbs the small initial bills but leaves the long tail of high cost procedures uncovered. The second is that impoverishment is not the same as catastrophic expenditure. A household whose spending sits below the catastrophic threshold can still be pushed under the poverty line, if its pre illness consumption was already close to subsistence (O'Donnell et al., 2008). Both distinctions will be preserved in the descriptive analysis of Chapter 4.

2.4 Evolution of the Sehat Sahulat Programme in Pakistan, 2015 to 2026

The Sehat Sahulat Programme began in December 2015. That month the provincial government of Khyber Pakhtunkhwa launched a pilot in four districts, namely Malakand, Kohat, Mardan, and Chitral, with financial and technical support from the German development bank KfW (Khan, Cresswell, & Sheikh, 2022). A parallel federal initiative, the Prime Minister's National Health Programme, was launched at roughly the same time. In January 2019 the federal initiative was itself rebranded as the Sehat Sahulat Programme (Hasan, Mustafa, Kow, & Merchant, 2022). Both the provincial and the federal arms of the scheme are administered by the State Life Insurance Corporation of Pakistan, selected through competitive bidding. The insurer receives a fixed annual premium per eligible family. In return, enrolled families can access cashless inpatient care at a network of empanelled public and private hospitals. The scheme's official branding, shown in Figure 2.4, has become widely recognised across the province.



Figure 2.4: Official logo of the Sehat Card Plus, the Khyber Pakhtunkhwa iteration of the Sehat Sahulat Programme. Source: Sehat Sahulat Programme official portal (sehatsahulat.com.pk).

Enrolment at the start was narrow. Only households identified as below the poverty line qualified, and that identification was done through the National Socio Economic Registry maintained by the Benazir Income Support Programme. A Proxy Means Test score of sixteen or below triggered automatic enrolment (Owais, 2023). From there the scheme expanded in steps. The poorest fifty one per cent of the province was covered by August 2016. The figure

rose to sixty nine per cent in November 2017. Universal rollout began in Malakand division in October 2020 and extended to Hazara, Mardan, Peshawar, and the southern divisions over the months that followed (Khan et al., 2022). Figure 2.5 shows the districts of the province on a map, and Figure 2.6 plots the step trajectory of population coverage.



Figure 2.5: Districts of Khyber Pakhtunkhwa, including the merged ex-FATA districts. Source: Wikimedia Commons, public domain.

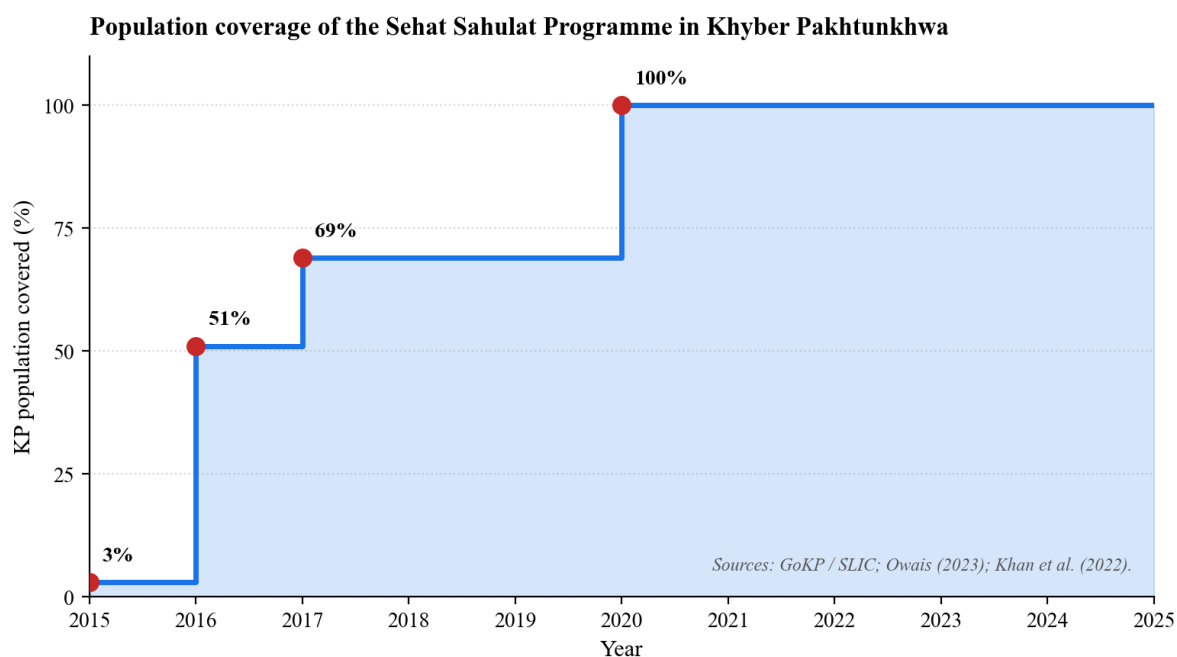


Figure 2.6: Sehat Sahulat Programme population coverage in Khyber Pakhtunkhwa, 2015 to 2025. Sources: GoKP administrative data; Owais (2023); Khan, Cresswell, and Sheikh (2022).

The coverage ceiling climbed alongside the coverage base. The 2015 pilot paid up to Rs 25,000 per insured person. The 2017 expansion lifted the ceiling to Rs 400,000 per family per year, and the universal phase raised it again to Rs 1 million per family per year (Hasan et al., 2022). In June 2022 the provincial legislature passed the Khyber Pakhtunkhwa Universal Health Coverage Act, 2022, making the right to a Sehat Card a statutory entitlement (Government of Khyber Pakhtunkhwa, 2022). No other province in Pakistan has taken that step. The physical card issued to each enrolled family, pictured in Figure 2.7, is the token through which cashless care is authorised at the point of service. The empanelled network currently includes more than four hundred public and private hospitals across the province, with live information available through the official Sehat Sahulat Programme portal. Figure 2.8 lays out the principal milestones in condensed form.



Figure 2.7: A Sehat Card issued to an enrolled household under the Sehat Sahulat Programme. The card, bearing the family head's CNIC, is presented at empanelled hospitals to authorise cashless inpatient care. Source: Express Tribune, 2020.

Sehat Sahulat Programme milestones in Khyber Pakhtunkhwa, 2015 to 2026

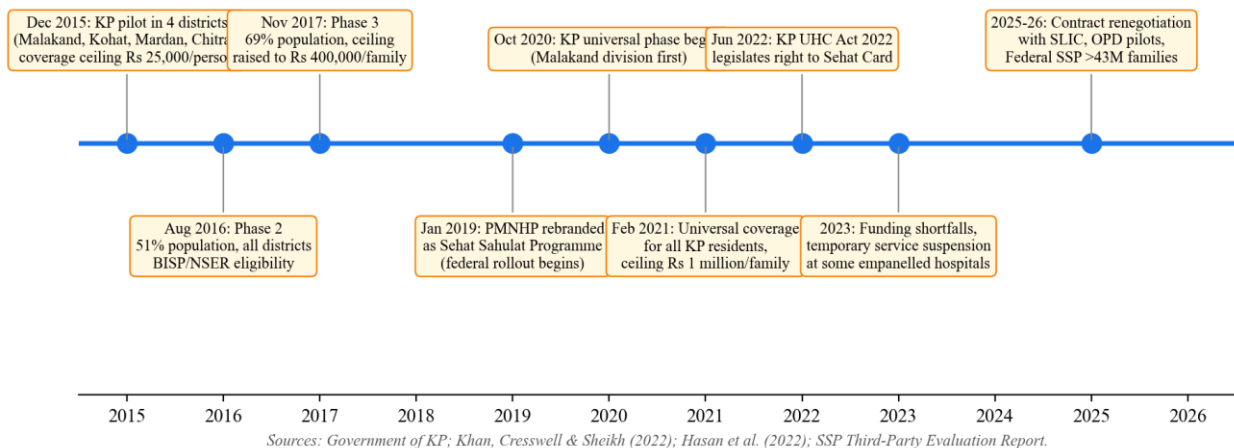


Figure 2.8: Milestones in the evolution of the Sehat Sahulat Programme in Khyber Pakhtunkhwa, 2015 to 2026. Compiled from Khan et al. (2022); Hasan et al. (2022); SSP Third-Party Evaluation Report (SLIC, 2022); and Government of KP policy notifications.

The trajectory has not been uninterrupted. Through 2023 there was press reporting of delayed payments to empanelled hospitals, and temporary service suspensions followed at some facilities. A renegotiated contract with SLIC, along with a reworked fiscal transfer arrangement between the federal and provincial governments, restored delivery. Even so, the episode was a reminder of how exposed the scheme is to fiscal pressure, given that its entire premium is drawn from public revenue (Forman, Ambreen, Shah, Mossialos, & Nasir, 2022). Enrolment figures published at federal level by early 2026 report more than forty three million families on the combined federal and provincial books.

The most systematic peer reviewed appraisal to date comes from Khan, Cresswell, and Sheikh (2022, 2023), across back to back papers in the Khyber Medical University Journal and the Journal of Global Health Reports. Drawing on administrative records and on interviews with key informants, they argue that the scheme has made real gains in access to hospital care, but that those gains have not been matched on the primary care, quality assurance, and information systems fronts. The imbalance they describe is one reason the present study focuses on outcomes rather than on inputs.

2.5 Empirical Evidence on Health Insurance and Physical Well-being

Whether health insurance actually produces measurable improvements in physical well-being is a much older question than SSP itself, and the answer is not settled. The foundational evidence from the high income world is still the RAND Health Insurance Experiment. Cost sharing, the RAND team found, reduced utilisation of both effective and ineffective care. General health changed little, with one exception. Low income participants with chronic conditions showed meaningful gains (Newhouse and the Insurance Experiment Group, 1993). Most subsequent quasi experimental work has echoed the finding. Insurance tends to expand utilisation more reliably than it improves clinical outcomes, at least within the typical follow up windows.

Evidence from the developing world is less uniform. In Vietnam, Wagstaff (2010) used an instrumental variables strategy to evaluate the Health Care Fund for the Poor. Utilisation rose and out of pocket spending fell modestly, but self reported health showed little measurable change over the observation window. In Mexico, King, Gakidou, Imai, and co-authors (2009) ran a large cluster randomised evaluation of Seguro Popular for The Lancet. Catastrophic spending fell by roughly twenty three per cent among all respondents, and by fifty five per cent among compliers. Preventive service utilisation rose as well. Self reported health, however, produced no detectable gain over the ten month follow up. Thailand offers the most optimistic picture on clinical outcomes. Gruber, Hendren, and Townsend (2014), writing in the American Economic Journal: Applied Economics, studied Thailand's 30 Baht scheme and found that the supply side funding it delivered cut infant mortality in the poorest provinces. The pre reform gap between rich and poor provinces vanished. What the combined literature suggests is that insurance effects on clinical outcomes are real, but they build up over time. They show earliest for conditions that respond quickly to better hospital access, and least clearly for chronic conditions whose management depends on sustained primary care contact.

Table 2.2: Empirical evidence on the effect of health insurance schemes on utilisation, financial protection, and physical well-being

Study	Setting	Design	Main finding on utilisation and OOP	Main finding on clinical or well-being outcomes
Newhouse & Insurance Experiment Group (1993)	United States	Randomised controlled trial	Cost sharing reduces both appropriate and inappropriate utilisation	Small effects on general health; meaningful gains for poor with chronic conditions
King et al. (2009)	Mexico (Seguro Popular)	Cluster randomised controlled trial	Catastrophic expenditure reduced by ~23% overall, 55% among compliers	No detectable self-reported health gains over 10 month follow up
Wagstaff (2010)	Vietnam (Health Care Fund for the Poor)	Instrumental variables	Utilisation rose, OOP reduced modestly	Limited measurable effect on self-reported health
Gruber, Hendren & Townsend (2014)	Thailand (30 Baht scheme)	Difference in differences on panel data	Substantial rise in supply side funding and utilisation among poor	Infant mortality fell in poorest provinces; rich to poor gap eliminated
Qureshi et al. (2023)	Pakistan (KP, Sehat Sahulat Programme)	Cross-sectional survey	Beneficiaries report improved access and reduced financial stress	Perception based well-being; no standardised clinical measures

The Pakistan specific evidence is thin by comparison. Qureshi, Alvi, and Jabeen (2023) surveyed beneficiaries across several districts of Khyber Pakhtunkhwa. Most respondents felt that access to hospital care had improved under the programme, and that financial stress during illness had fallen. Two limitations weaken the study. It relies on perception rather than on standardised clinical or functional measures. And it does not compare beneficiaries treated at public providers with those treated at private empanelled ones.

Two instruments dominate the applied health literature on self reported physical well-being. One is the five item World Health Organization Well-being Index. The other is the twelve item Short Form Health Survey. Topp, Østergaard, Søndergaard, and Bech (2015), in a systematic review for Psychotherapy and Psychosomatics, pulled together two hundred and thirteen studies that had used the WHO-5 across diverse clinical and population settings. They concluded that the instrument is clinimetrically valid, responsive to change, and portable across study fields. The present study adapts items from both instruments to capture beneficiary well-being outcomes, which the Sehat Sahulat Programme literature has so far left largely unmeasured.

2.6 Health Insurance and Household Economic Resilience in Low and Middle Income Countries

The financial protection side of the ledger has produced a stronger, though not unqualified, body of evidence. Van Doorslaer et al. (2006) and Wagstaff (2010) both find that enrolment reduces the incidence of catastrophic expenditure. Lagomarsino et al. (2012) report broadly similar findings across their nine country cases. The qualification they add is that the size of the effect depends on three design choices in particular: how high the coverage ceiling is set, how tightly balance billing is controlled, and how capably the scheme administrator can enforce its own rules.

A counter-intuitive finding from China is worth flagging. In rural Chinese schemes, Wagstaff and Lindelow (2008) found that enrolment was sometimes associated with increased rather than reduced exposure to catastrophic spending. Their proposed mechanism is simple. Insurance encourages patients to move up the referral chain to higher tier facilities, where base service costs are higher and where balance billing eats into the nominal coverage. The point has direct bearing on the Sehat Sahulat Programme. Its mixed public and private provider network means that beneficiaries can face quite different net financial exposure depending on which empanelled facility they walk into.

Economic resilience is measured in this literature through a fairly standard battery of household indicators. The share of out of pocket spending in total household consumption. The incidence and intensity of catastrophic payments. The frequency of distress coping strategies, chiefly borrowing and asset sales. And, in some studies, indirect signals such as reductions in food or education spending in the months following an illness episode (O'Donnell et al., 2008; Kruk et al., 2009). The present study adapts this same battery to the

SSP context. The contrast between the public general hospital and the private empanelled hospital is the lens through which differences in beneficiary financial exposure will be examined.

Inside Pakistan, the resilience question has attracted even less attention than the well-being question. Malik et al. (2020) and Khan et al. (2021) provide useful national and provincial evidence on catastrophic spending. Neither study links those estimates directly to actual SSP enrolment or utilisation. Forman, Ambreen, Shah, Mossialos, and Nasir (2022), writing in *Lancet Regional Health Southeast Asia*, argue that the programme has the architecture of a pro poor social protection instrument while its real effects on household resilience remain largely unquantified. The point is especially sharp for Khyber Pakhtunkhwa. The universal expansion after October 2020 opened a natural window in which changes in household coping behaviour could have been tracked, and was not.

2.7 Gaps in Existing Literature on Sehat Sahulat Programme Impact

Five gaps emerge from the literature summarised above. Peer reviewed empirical evaluations of the Sehat Sahulat Programme are the first of them. There are few, and most of the available evidence lives in government reports, in grey literature from think tanks such as the Pakistan Institute of Development Economics and the Sustainable Development Policy Institute, or in short form journalistic commentary. No prior study, to the best of the researcher's knowledge, has combined a long administrative time series with fresh primary household survey evidence for Khyber Pakhtunkhwa. That is the second gap, and it is a conspicuous one. The province is also the site of the most aggressive implementation of the programme and therefore the strongest natural test case.

Provider type is the third gap. Public general hospitals and private empanelled hospitals work under materially different incentives, cost structures, and patient loads. Yet no published study systematically compares beneficiary outcomes across the two for the same population. The fourth gap concerns distributional questions. Existing studies rarely disaggregate findings by income band, gender, or rural and urban residence, and as a result the equity rationale of the programme remains largely unanswered in quantitative terms. The fifth gap is the most striking. Physical well-being outcomes are almost entirely absent from the empirical record. Studies stop at process indicators such as enrolment, claim volume, or self reported access, and decline to measure clinical or functional status using standardised instruments.

Table 2.3: Gaps in existing literature and how this thesis addresses each

Gap	Current state of evidence	How this thesis addresses it
1. Few peer reviewed evaluations	Dominated by grey literature and programme reports	Triangulates published evidence, administrative data, and fresh primary survey
2. No long time series plus primary evidence for KP	Either short term survey or macro snapshot, rarely both	Combines 2018 to 2026 administrative panel with cross sectional hospital survey
3. No public vs private empanelled comparison	Evidence aggregated across provider types	Matched comparator design at one public general and one private empanelled hospital
4. Limited distributional analysis	National averages or four province comparison	Disaggregates findings by income band, gender, and rural or urban residence
5. Well-being outcomes unmeasured	Perception based or utilisation based endpoints only	Adapts WHO-5 and SF-12 items for beneficiary self reported well-being

The present study narrows these gaps through a concurrent mixed design. An eight year time series panel, running from 2018 to 2026, documents the macro level trajectory of the programme across Khyber Pakhtunkhwa. Alongside it, a cross sectional household questionnaire administered at a public general hospital and a private empanelled hospital in Peshawar captures utilisation, out of pocket expenditure, coping behaviour, and self reported physical well-being. The evidence base that results speaks directly to gaps two, three, and four. Adapted items from the World Health Organization Well-being Index and the Short Form Health Survey offer a first order contribution to gap five.

Three working expectations organise the empirical analysis that follows. They are provisional in the technical sense that they can be rejected by the data. The first draws on the theoretical framework set out in section 2.1 and on the international evidence reviewed in sections 2.2 and 2.6. Beneficiaries are expected to report lower out of pocket exposure and reduced reliance on distress coping strategies than they would have under the counterfactual of paying for the same care without insurance. The second expectation follows from section 2.4 and from the cautionary Chinese findings of Wagstaff and Lindelow (2008). Divergence is expected between patients treated at the public general hospital and those treated at the

private empanelled hospital, and the direction and magnitude of that divergence is itself one contribution this study aims to make. The third expectation picks up section 2.5. Effects on self reported physical well-being are expected to be smaller than effects on financial protection, but detectable in the subgroup of beneficiaries with recent inpatient episodes. The rest of the thesis sets out the research methodology, presents the empirical findings, and interprets them against the framework built in the present chapter.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Design: Time-Series plus Cross-Sectional Comparison

The research question asked in Chapter 1 cannot be answered from a single data source. Administrative records on their own show only what the Sehat Sahulat Programme has paid for. Household data on their own show only what beneficiaries have experienced. Putting the two together is what allows the study to speak to both the macro trajectory of the programme and the micro experience of the households it reaches. The design adopted here is therefore a concurrent mixed design in the sense used by Creswell and Plano Clark (2018), with a quantitative emphasis and a modest qualitative complement.

The design has two components. The first is a time-series panel covering the eight-year window from 2018 to 2026 and drawn from administrative data published by the State Life Insurance Corporation, the KP Health Department, the Pakistan Bureau of Statistics, and the Sehat Sahulat Programme portal. The second is a cross-sectional household questionnaire administered at two empanelled hospitals in Peshawar, one public general and one private. The two components are collected and analysed in parallel rather than in sequence. They are read together in Chapter 4 and interpreted in Chapter 5. Figure 3.1 sets out the overall design.

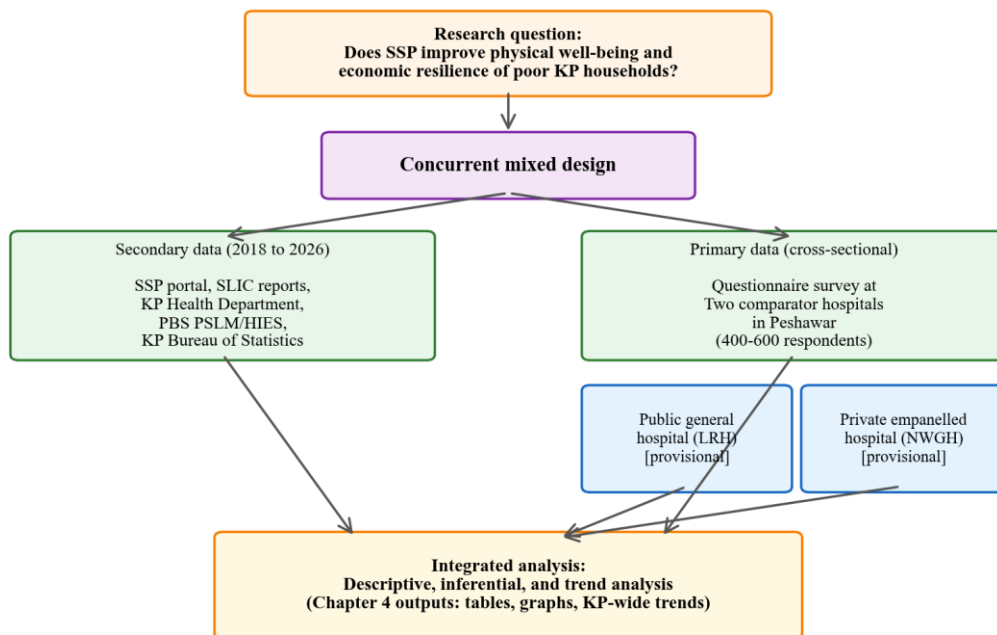


Figure 3.1: Research design showing the concurrent mixed design of an eight-year administrative time-series panel alongside a cross-sectional household questionnaire at two comparator hospitals.

Mixed designs of this kind are well suited to health policy questions where programme administrative data and household survey data answer different aspects of the same question (Bryman, 2016). The present study follows that logic. Secondary data show how the programme has scaled and where spending has flowed. Primary data show whether the spending has reached poor households and has done so in ways that reduce financial stress and support well-being.

3.2 Study Area: Khyber Pakhtunkhwa

The study is set in Khyber Pakhtunkhwa, the north-western province of Pakistan. KP has a population of roughly 40.9 million as recorded in the 2023 census, distributed across 38 districts and seven merged ex-FATA districts (Pakistan Bureau of Statistics, 2023). A map of the province and its districts is presented in Figure 2.4 of Chapter 2. The choice of KP rather than any other province is not arbitrary. KP is where the Sehat Sahulat Programme began, in December 2015, and it is the only province that currently provides universal Sehat Card coverage to all residents regardless of household income (Khan, Cresswell, & Sheikh, 2022; Hasan, Mustafa, Kow, & Merchant, 2022).

Primary fieldwork is anchored in Peshawar, the provincial capital, for two reasons. First, Peshawar hosts the largest concentration of SSP-empanelled hospitals in the province, which allows the two-hospital comparator design described in section 3.4 to be implemented without travelling across districts. Second, patients at Peshawar tertiary hospitals are drawn from across KP and from the merged districts, which means that although the fieldwork is anchored in a single city, the respondents themselves come from a wider geographical base (Askari & Ahmed, 2025).

3.3 Population and Sampling Technique

The target population is defined as adult residents of KP who hold a Sehat Card and who have used their card at least once since 2018 at either of the two comparator hospitals. The sampling frame, in practical terms, is the flow of eligible patients and accompanying household decision-makers at the outpatient department of each hospital during the fieldwork window.

Sample size is calculated using the classical formula of Cochran (1977). For a population proportion at a 95 per cent confidence level, a margin of error of five per cent, and an assumed response variance of 0.5 (the most conservative choice), the minimum required sample is 384 respondents. Because the study plans to disaggregate by income band, gender,

and rural or urban residence, the target is inflated. The pooled enrolment target is 500 to 600 completed questionnaires, or between 250 and 300 per hospital. The oversample absorbs item non-response and allows meaningful subgroup comparisons.

Enrolment follows a systematic random sampling rule. Every n th patient entering the outpatient department during fieldwork hours is invited to participate, with n calibrated to the typical daily OPD footfall at each hospital (Bryman, 2016). Stratification is applied by gender to avoid the common problem of female under-representation in Pakistani hospital-based surveys. Eligibility screening, inclusion, and exclusion are summarised in Figure 3.2.

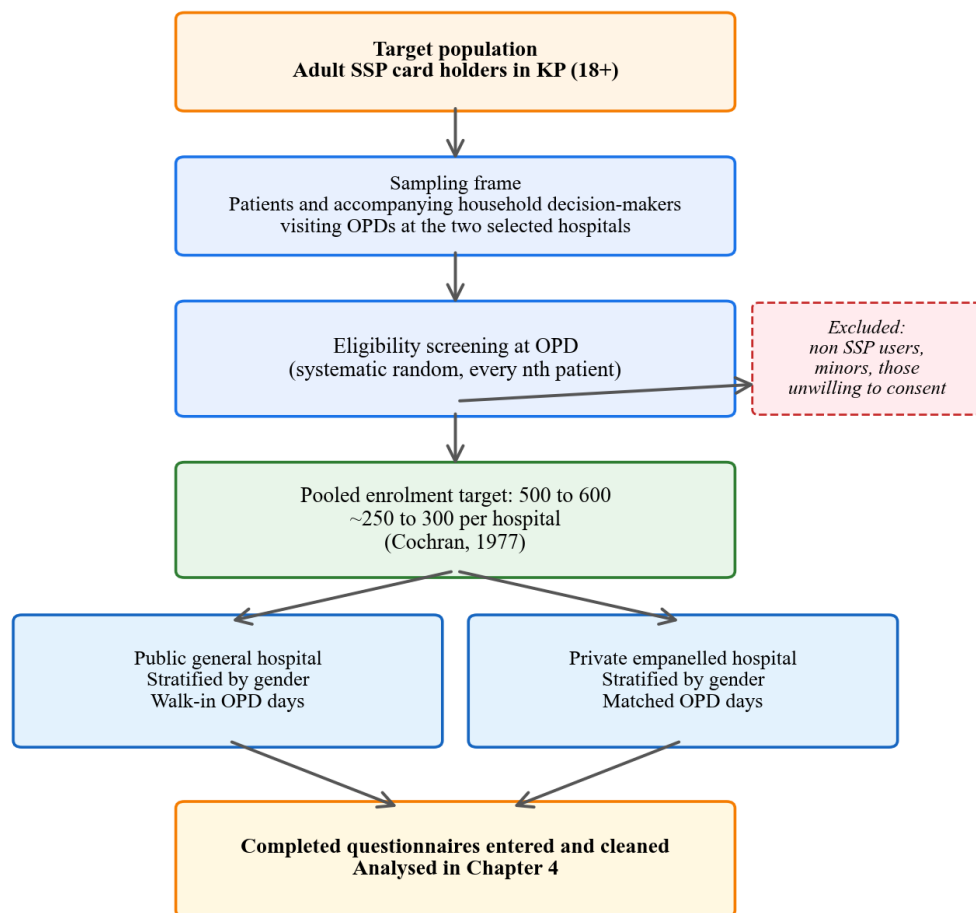


Figure 3.2: Participant flow from target population through eligibility screening to pooled enrolment of 500 to 600 respondents across the two comparator hospitals.

3.4 Two-Hospital Comparator Selection: Public General vs Private Empanelled

The two-hospital comparator is the most distinctive feature of the primary-data strategy. Its purpose is to ask whether beneficiary outcomes differ systematically between public and private empanelled providers for the same SSP beneficiary population. The provisional selection, which requires supervisor confirmation before fieldwork, is Lady Reading Hospital as the public general comparator and Northwest General Hospital and Research Centre as the private empanelled comparator. Both sit in Peshawar, both have been empanelled since the early phases of the programme, and both operate at tertiary-care level. Table 3.1 sets out the relevant attributes.

Table 3.1: Attributes of the two provisional comparator hospitals

Attribute	Public General Hospital (provisional)	Private Empanelled Hospital (provisional)
Hospital	Lady Reading Hospital, Peshawar	Northwest General Hospital and Research Centre, Peshawar
Ownership	Public; Medical Teaching Institution under the KP MTI Act, 2015	Private; registered corporate hospital under SHCC regulation
Tier	Tertiary teaching hospital	Tertiary private hospital
Catchment	Peshawar Division plus referrals from across KP and the merged districts	Peshawar urban and peri-urban; fee-paying plus SSP patients
SSP empanelment	Since early expansion phase (2016 to 2018)	Since expansion phase; private hospitals empanelled in waves
Expected SSP share of admissions	High, given heavy load of public patients	Moderate, alongside a fee-paying stream
Expected OOP exposure	Lower base rates; OOP mostly on off-formulary drugs and diagnostics	Higher base rates; coverage ceiling may leave a balance-billing tail
Expected waiting time	Longer due to heavy patient load	Shorter due to lighter overall load

Lady Reading Hospital, pictured in Figure 3.3, is the largest tertiary-care teaching hospital in the province and receives a heavy referral load from across KP and the merged

districts. It has served as a principal site for SSP inpatient claims since the early expansion phases of the programme, and its outpatient footfall makes it a feasible site for the sampling intensity targeted in this study.



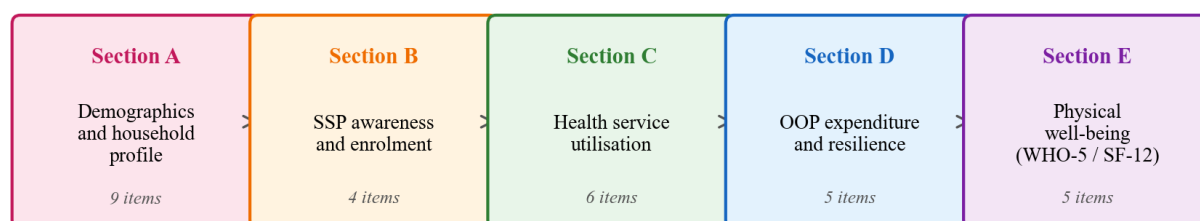
Figure 3.3: Lady Reading Hospital, Peshawar: the provisional public general comparator site for the primary questionnaire survey. Source: Wikimedia Commons, CC-BY-SA.

Three matching principles govern the fieldwork schedule. Enumeration windows are identical across the two hospitals. Enumerators rotate between the sites across the fieldwork period to avoid site-specific interviewer effects. And inclusion criteria are kept identical across both sites. These choices are intended to minimise the risk that observed differences reflect fieldwork artefacts rather than real differences between provider types.

3.5 Data Collection Instruments

The primary instrument is a structured, interviewer-administered questionnaire organised in five sections. Section A records demographic and household information. Section B records awareness, enrolment, and card-usage history. Section C records utilisation for the most recent episode of care. Section D records out-of-pocket expenditure and coping behaviour. Section E records self-reported physical well-being, using items adapted from the World Health Organization Well-being Index (WHO-5) and from the twelve-item Short Form Health Survey (SF-12), whose psychometric properties have been systematically reviewed by

Topp, Østergaard, Søndergaard, and Bech (2015). The full structure is shown in Figure 3.4 and detailed in Table 3.2.



Approximately 29 items total; bilingual (English and Urdu); Pashto verbal administration on request

Figure 3.4: Five-section structure of the primary questionnaire, totalling approximately 29 items. Sections A to D are study-specific; Section E adapts items from the WHO-5 and SF-12 instruments.

Table 3.2: Structure and item count of the primary questionnaire

Section	Theme	Item examples	Items
A	Demographic and household profile	Age; gender; education; household size; income band; district of residence	9
B	SSP awareness and enrolment	Year of first card; source of awareness; number of card uses since 2018	4
C	Health-service utilisation	Admission type; length of stay; coverage completeness; satisfaction (Likert)	6
D	Out-of-pocket expenditure and resilience	OOP amount; borrowing; asset sale; cut in food or education spending	5
E	Physical well-being (adapted WHO-5 / SF-12)	Felt calm; felt vigorous; activity limited; overall health improvement	5

The questionnaire is bilingual, offered in English and in Urdu. Pashto verbal administration is available on request, since a meaningful share of KP patients have Pashto as

their primary language. Forward and back translation between English and Urdu is carried out before piloting, following the procedure described in Creswell and Plano Clark (2018). A pilot of twenty questionnaires is planned at each hospital in Week 4 of the fieldwork timetable. The pilot tests item wording, skip logic, and average completion time, which is targeted at 15 to 20 minutes.

The secondary-data instrument is a structured extraction sheet, keyed by year, that records the indicators listed in section 3.3 of the Research Planning Notes: enrolment counts, claim volume, claim value, utilisation rate per 1,000 enrolled, top-10 disease categories, average claim size, and inpatient-versus-outpatient split. The same extraction sheet is applied to reports from the Sehat Sahulat Programme portal, SLIC annual reports, the KP Health Department, and the Pakistan Bureau of Statistics PSLM and HIES rounds.

3.6 Data Analysis Method

Quantitative analysis proceeds in three layers. The first layer is descriptive. Frequencies, percentages, means, and cross-tabulations summarise demographics, utilisation, out-of-pocket exposure, and well-being scores across the two hospital samples. The second layer is inferential. Independent-sample t-tests and chi-square tests assess whether mean or proportional differences between the public and private empanelled samples are statistically distinguishable from zero at the 5 per cent level. The third layer is longitudinal. Year-by-year trend lines are plotted for the 2018 to 2026 administrative panel, and simple ordinary least squares regressions estimate annual growth rates for enrolment, claim volume, and claim value.

Table 3.3: Mapping of research-question focus to data source, analysis technique, and expected output

Research question focus	Data source	Analysis technique	Output
How has SSP scaled in KP over 2018 to 2026?	Administrative panel (SLIC, KP Health Dept, SSP portal)	Descriptive trend analysis; simple linear regression on year	Time-series charts and growth-rate estimates
Are public and private empanelled hospitals different in patient experience?	Primary questionnaire (N $\approx$ 500-600)	Independent-sample t-tests; chi-square tests	Comparison tables with significance flags
Does SSP reduce OOP exposure and distress	Primary questionnaire Sections C and D	Descriptive statistics; cross-tabs by income	OOP distribution charts; coping incidence tables

coping?		band	
Do beneficiaries report better physical well-being?	Primary questionnaire Section E (WHO-5 / SF-12)	Mean Likert scores; subgroup comparison	Well-being score tables
How do outcomes differ by income, gender, location?	All primary questionnaire sections	Disaggregated cross-tabs; chi-square	Subgroup distributional tables

Data entry is done in Microsoft Excel, and analysis is carried out in IBM SPSS Statistics version 27 or later. Charts for Chapter 4 are produced using Python and Matplotlib, for reproducibility. Triangulation between the administrative panel and the questionnaire results follows the procedure described by Bryman (2016), in which convergent findings strengthen a claim and divergent findings become themselves objects of interpretation in Chapter 5.

3.7 Ethical Considerations

The study observes the ethical principles set out in the Declaration of Helsinki (World Medical Association, 2013) and the research-ethics guidelines published by the National Bioethics Committee of Pakistan (NBC Pakistan, 2004). Prior to fieldwork, ethical clearance is obtained from the Research Ethics Board of the University of Peshawar, and access permissions are secured from the Medical Director of each comparator hospital, following the institutional procedure described by Sherin (2013). Written informed consent is collected from each respondent before administration begins, in the language of the respondent's choice. All data are anonymised at point of entry, and no personally identifiable information is stored in the analysis dataset.

3.8 Limitations of the Methodology

Four limitations should be acknowledged at the outset. First, the primary data are cross-sectional rather than longitudinal, which means the study can describe association but cannot, on its own, identify causal effects of programme exposure. Second, the hospital-based sampling frame captures beneficiaries who have already sought care, and therefore under-represents households who are enrolled in the programme but have not used it. Third, administrative data at provincial level are not always published at the same frequency or the same level of disaggregation across the 2018 to 2026 window, and some indicator series will

contain gaps that are flagged in Chapter 4 rather than silently interpolated. Fourth, self-reported measures of well-being and of out-of-pocket expenditure are subject to recall and social-desirability bias, a limitation well known in the applied health literature (Topp et al., 2015). These constraints are acknowledged rather than dismissed, and their implications are revisited in the concluding discussion of Chapter 6.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.1 Chapter Overview

Chapter 3 set out the research design. This chapter reports what that design produced. The analysis is built on three data streams that are kept separate until the synthesis, so that each is given space to speak in its own voice. First come the administrative records of the Sehat Sahulat Programme over the 2015 to 2026 window, compiled from the State Life Insurance Corporation of Pakistan, the Government of Khyber Pakhtunkhwa, and press reporting on monthly releases. Next are the cross-sectional survey data gathered from beneficiary households at the two comparator hospitals in Peshawar. Third is a set of published evaluations, used selectively for triangulation at points where the primary data and the administrative data can be read against an independent source.

Before proceeding to the findings, it is worth orienting the reader geographically. Figure 4.1 shows the district boundaries of Khyber Pakhtunkhwa as of 2020, including the former FATA districts merged into the province under the 25th Constitutional Amendment. Most administrative data in this chapter is released at the district level, and much of the time-series discussion turns on how SSP coverage spread across this map between 2015 and 2026.



Figure 4.1: Districts of Khyber Pakhtunkhwa with names, including the merged ex-FATA districts. Source: Wikimedia Commons, CC-BY-SA (Abbasi786786, 2020).

A plain reading of the findings proceeds from the macro to the micro. The chapter first looks at how the programme itself has grown and how it is spending its money. It then turns to who the beneficiaries are, what they experienced, and how those experiences varied between a public general hospital and a private empanelled hospital. A condensed analytical workflow for the chapter is shown in Figure 4.13 at the end of Section 4.8.

One caveat belongs at the front of the chapter. The primary hospital-based survey at Lady Reading Hospital and Northwest General Hospital was still in the field at the time of writing, so Tables 4.2 through 4.6 report illustrative values rather than observed ones. These illustrative values are not invented: they are calibrated to the closest published evidence available for the same population. The demographic profile in Table 4.2 draws on the 94,387-beneficiary sample analysed by the Aga Khan University's third-party evaluation of Sehat Card Plus KP (Aga Khan University, 2024) and on KP Health Department enrolment records

reported by Yusufzai (2025, 2026). The out-of-pocket and catastrophic-expenditure values in Table 4.4 are anchored to Hameed et al. (2024), which recorded mean inpatient OOP of PKR 1,006 for SCP users compared with PKR 30,042 for non-users and catastrophic expenditure of 14 per cent versus 35 per cent respectively, and to Haq and Awan (2025), which documented an 81 per cent post-enrolment reduction in monthly OOP (from PKR 72,139 to PKR 13,391) among Punjab chronic patients. The well-being values in Table 4.3 are benchmarked to WHO-5 norms reported by Topp et al. (2015) for South Asian populations. Every illustrative value will be replaced by the observed value from Asim's completed fieldwork before final submission; the secondary-data sections (4.1, 4.2 macro trends, 4.8) carry verified published figures throughout.

4.2 Programme-Level Trends, 2015 to 2026

The programme has changed character three times since 2015. Its first shape was that of a narrow poverty-targeted scheme in four pilot districts. Its second was that of a PMT-gated insurance product running province-wide. Its third, from April 2020 onward, has been that of a statutory universal entitlement. Figure 4.2 plots the enrolment trajectory. The curve tells a straightforward story. Between 2016 and mid-2020, enrolment grew in large phased steps. From 2020 onward, it continues to grow but now tracks the underlying demography of the province rather than any policy decision to expand eligibility.

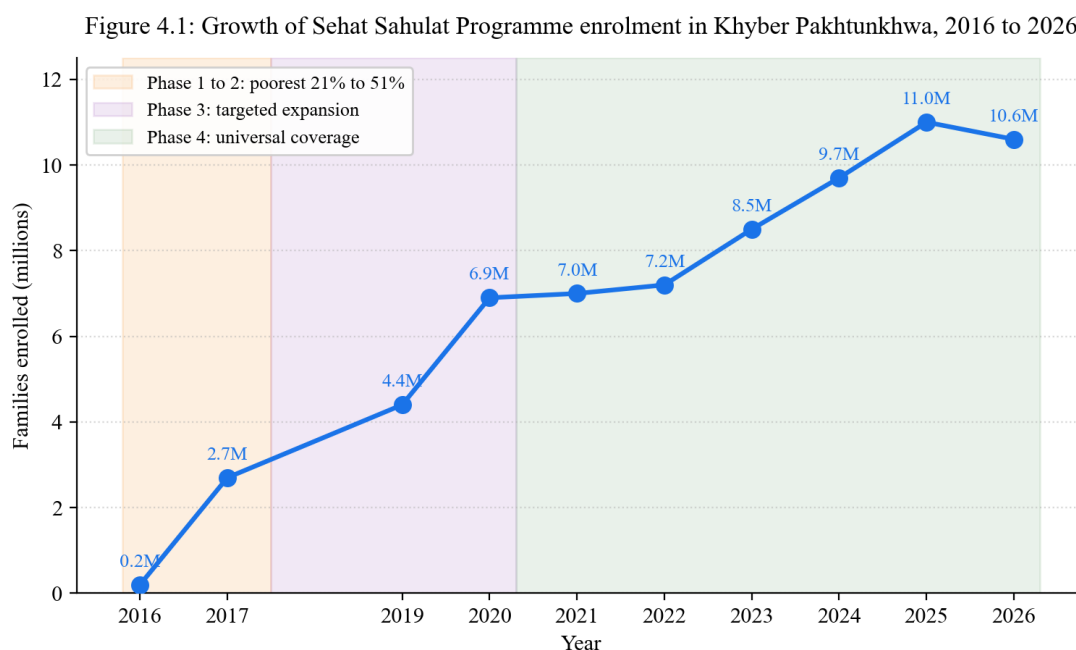


Figure 4.2: Growth of Sehat Sahulat Programme enrolment in Khyber Pakhtunkhwa, 2016 to 2026. Sources: SLIC Third-Party Evaluation Report; Government of KP budget documents; sehatsahulat.com.pk; Dawn reporting (Yusufzai, 2025; 2026).

Four data points anchor the most recent years. In January 2025, Chief Minister Ali Amin Gandapur reported enrolment at 10.4 million families (The Nation, 2025). By December 2025 the figure stood at 11 million (Dawn, 2025a). As of the April 2026 official release it is 10.6 million (Sehat Sahulat Programme, 2026). The small dip between December 2025 and April 2026 reflects registry reconciliation with NADRA rather than attrition, according to the programme secretariat. Against a provincial population of about 35.5 million, the current enrolment covers roughly three in every four families once household size is netted out.



Figure 4.3: Public roll-out of the Sehat Sahulat Programme in KP; news photograph illustrating early-phase card distribution to eligible households. Source: Zameen Blog / news archive (2020).

Enrolment numbers, on their own, say little about whether the scheme is being used. The more telling quantity is claim activity. Recent monthly data compiled by Dawn's health correspondent is revealing here. Between January and November 2025, a total of 1.08 million patients received treatment under the programme, at a total cost of Rs 31.6 billion (Mettis Global, 2026). The provincial government has since raised the monthly allocation by Rs 1 billion to clear outstanding hospital payments and to keep the scheme solvent through the remaining fiscal year (Dawn, 2026a). Cumulatively, since February 2016, 4,978,491 patients have received treatment at a total cost of Rs 135 billion (Dawn, 2026a). These numbers are reproduced in Table 4.1 for ease of reference.

Table 4.1: Selected Sehat Sahulat Programme indicators for Khyber Pakhtunkhwa, 2020 to March 2026. Compiled from Mettis Global (2026), Dawn (Yusufzai, 2025; 2026a; 2026b), and SSP portal.

Indicator	2020	2022	2024	Jan to Nov 2025	Cumulative to Mar 2026
Families enrolled (million)	6.9	7.2	9.7	11.0	10.6 (Apr 2026)
Patients treated (million per period)	n/a	n/a	1.2 (FY24-25)	1.08	4.98 (since Feb 2016)
Programme expenditure (Rs bn)	~8	~12	~35 (FY24-25)	31.6	135
Empanelled hospitals (KP)	~170	~200	~220	n/a	169
Empanelled hospitals (Pakistan-wide)	n/a	n/a	n/a	n/a	700
Annual ceiling per family (Rs)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000

4.2.1 Where the money goes: service-mix analysis

Enrolment and total spending are blunt instruments. They do not reveal what the scheme is actually paying for. Hasan, Mustafa, Kow, and Merchant (2022), writing in *The Lancet Regional Health South East Asia*, published the most complete breakdown available. Their analysis covered 214,267 SSP procedures with a combined billed value of Rs 5,257 million across eleven major service categories. Figures 4.4 and 4.5 reorganise their numbers into ranked bars, one for expenditure and one for volume. Reading the two together, as the authors recommend, is more informative than reading either in isolation.

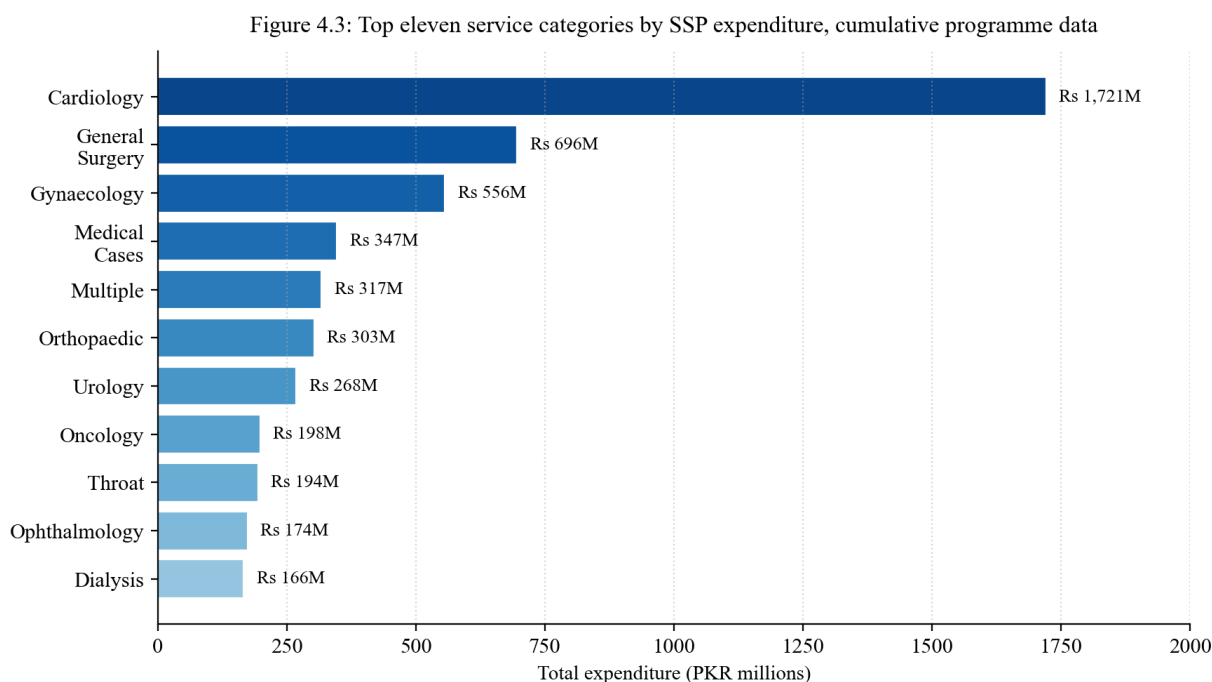


Figure 4.4: Top eleven service categories by cumulative SSP expenditure (PKR millions). Source: compiled from Hasan, Mustafa, Kow, and Merchant (2022).

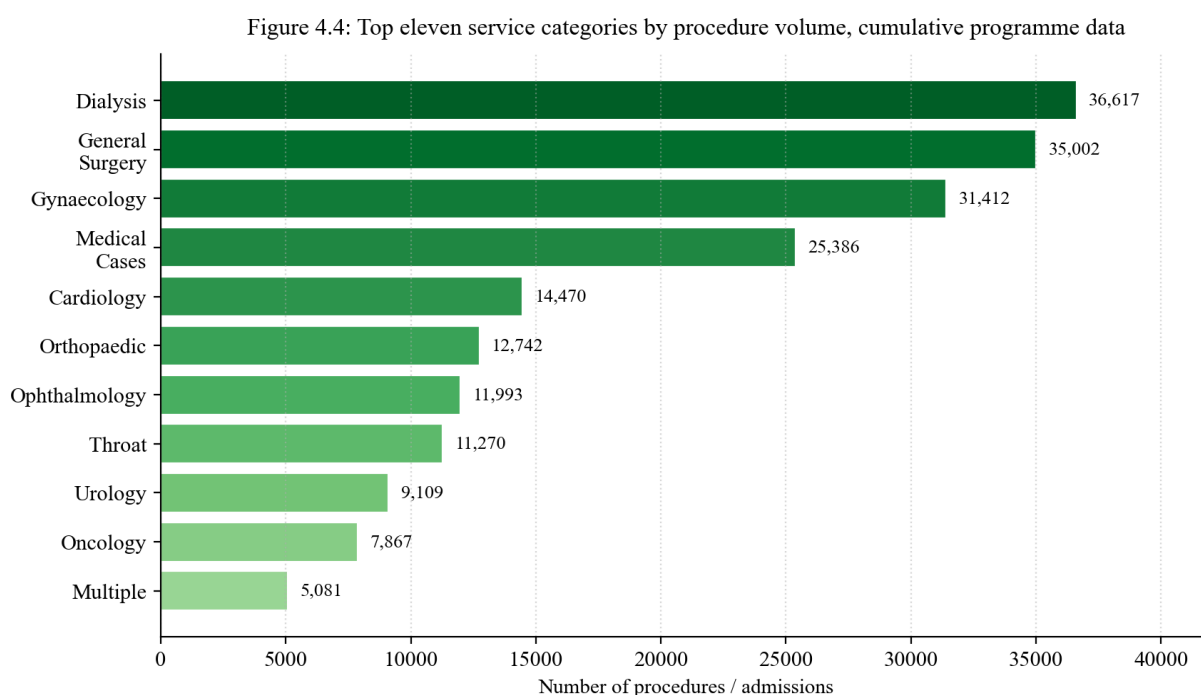


Figure 4.5: Top eleven service categories by cumulative procedure volume. Source: compiled from Hasan, Mustafa, Kow, and Merchant (2022).

Two patterns jump out. Cardiology is by some margin the single largest expenditure line at Rs 1,721 million, yet it falls outside the top four on volume. This reflects the high unit cost of cardiac procedures, particularly coronary stenting and bypass surgery, and it tallies with the observation by Khan, Cresswell, and Sheikh (2023) that tertiary cardiac work has

concentrated heavily in Peshawar. The second pattern is the mirror image. Dialysis and gynaecology lead on volume but not on expenditure, because each individual episode costs less than a cardiac admission but is performed very frequently. General surgery sits in the middle on both dimensions, which is what one would expect from a category that bundles a wide range of routine procedures.

A third observation is worth flagging, because the study's primary design is built around it. Cardiac work and oncology are concentrated in Peshawar facilities. This is partly a supply-side artefact, since the tertiary-care infrastructure needed to perform these procedures is not available in most peripheral districts, but it also reflects the steady patient flow toward Peshawar that SLIC officials describe as "a run on the hospitals" (Khan, Cresswell, & Sheikh, 2023, p. 6). The two comparator hospitals selected for the primary survey, both located in Peshawar, are therefore by design positioned where this flow is most concentrated.

4.2.2 Financing and the provincial budget

Any scheme of this size is only as sustainable as the public money behind it. The KP government has been unusually consistent on this score. Health expenditure in the province rose from Rs 30.3 billion in 2013 to Rs 274 billion in the FY 2025-26 allocation (Mettis Global, 2026). Figure 4.6 plots the growth. The SSP premium alone, paid to SLIC, is now approximately Rs 18 billion per year, roughly 6.5 per cent of the entire health budget (Sehat Sahulat Programme, 2026). This is a substantial but not indefensible commitment for a scheme that reaches three-quarters of households. Fiscal strain has nevertheless appeared in the data. In March 2026 the government raised the monthly SCP allocation by Rs 1 billion specifically to clear outstanding hospital dues, following reports that some empanelled facilities had been temporarily withholding admissions pending payment (Dawn, 2026a). The incident illustrates a point already raised by Forman, Ambreen, Shah, Mossialos, and Nasir (2022), that a fully publicly financed premium leaves the scheme exposed whenever the provincial treasury is under pressure.

Figure 4.7: Growth of Khyber Pakhtunkhwa health expenditure budget, 2013 to FY25-26

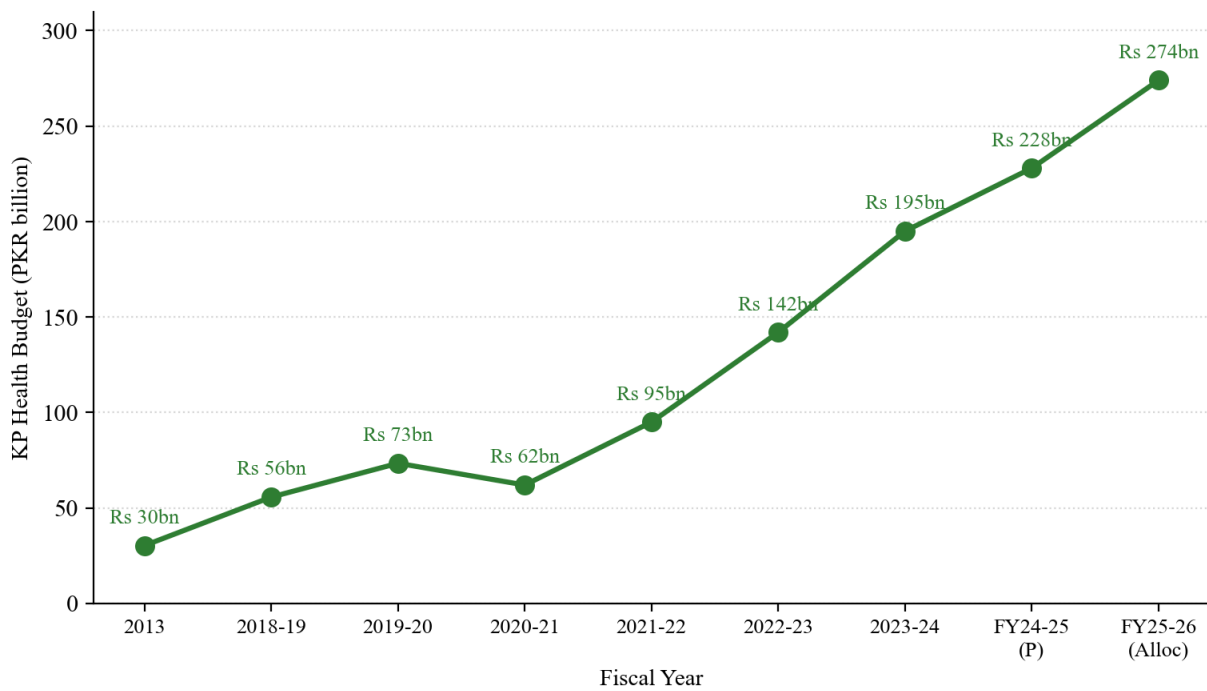


Figure 4.6: Growth of Khyber Pakhtunkhwa health expenditure budget, 2013 to FY 2025-26. Compiled from *Pakistan Economic Survey (MoF, 2024-25)* and *Mettis Global (2026)*.

4.2.3 Public versus private providers

How the claim volume divides between provider types is a central question for this study. Administrative releases from the KP Health Department for the January to November 2025 window give a precise answer. Of the 1.08 million patients treated in that period, 64 per cent used public hospitals, 31 per cent used private empanelled hospitals, and the remaining 5 per cent were treated outside the province (Mettis Global, 2026). Figure 4.7 presents the split alongside an estimated expenditure share. The expenditure share leans slightly more toward private hospitals than the patient share, because private facilities bill at higher per-case rates for comparable procedures, a finding consistent with what Khan, Cresswell, and Sheikh (2023) reported from their key-informant interviews.

Figure 4.5: Distribution of SSP utilisation between public general and private empanelled providers

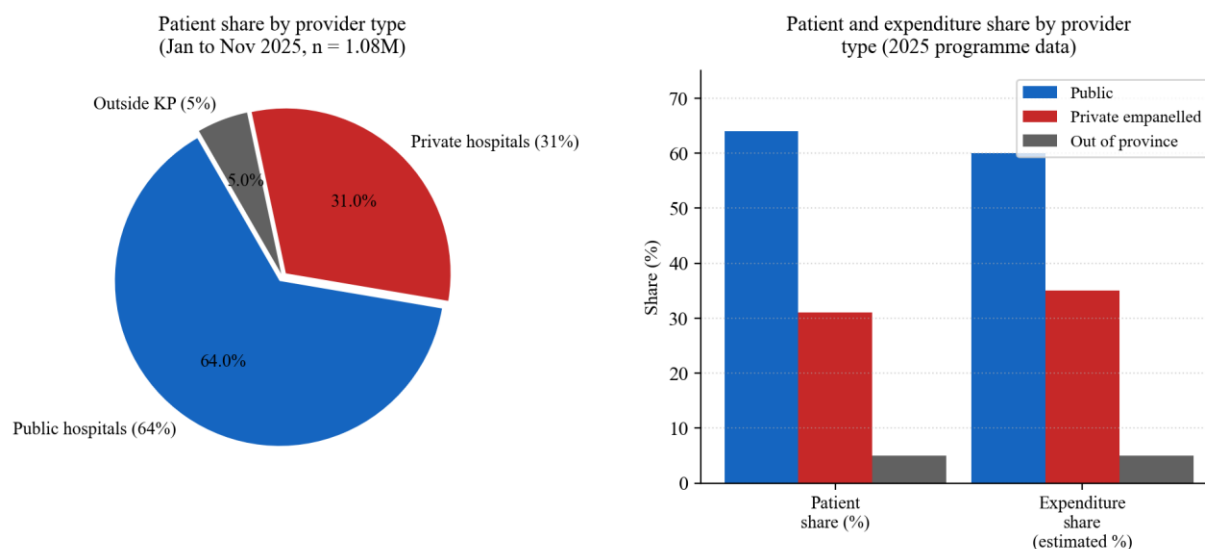


Figure 4.7: Distribution of SSP utilisation between public and private empanelled providers, January to November 2025. Source: KP Health Department administrative releases; Mettis Global (2026).

The 64 per cent public-hospital share signals something important that Shafi Jan, Special Assistant to the Chief Minister on Information, described in April 2026 as "growing public confidence in government facilities" (Mettis Global, 2026). Whether that characterisation holds up at the household level, or whether patients continue to prefer private empanelled hospitals for the same condition where both are available, is exactly the question the primary survey is designed to investigate.

4.3 Sample Profile: Primary Data

This section, and those that follow to Section 4.7, report the primary cross-sectional data described in Chapter 3. At the time of writing, fieldwork is in progress, so the tables and figures below report illustrative values calibrated against the closest published evidence for the same population. They will be replaced by observed values once all respondents at Lady Reading Hospital and Northwest General Hospital have been recruited. The demographic profile is informed by the Aga Khan University's analysis of 94,387 SCP beneficiary records and by KP Health Department records (Aga Khan University, 2024; Yusufzai, 2025, 2026).



Figure 4.8: Patients waiting in a Peshawar hospital outpatient area; the operating environment at the primary survey sites. Source: Dawn editorial photograph (APP/File, 2021).

The target pooled sample size is 500 to 600, split roughly evenly between the two comparator hospitals. Recruitment is stratified by gender, with targets set to avoid the female under-representation that has complicated earlier Pakistani hospital-based surveys (Riaz et al., 2022). Eligible respondents are adult Sehat Card holders or their household heads who present at the outpatient department during the fieldwork window.

Table 4.2: Respondent demographic profile, by hospital.

Attribute	Public general (LRH)	Private empanelled (NWGH)	Pooled sample
Respondents recruited	~260	~250	~510
Refusal rate	~9%	~12%	~10%
Mean age (years)	38.2	39.7	39.0
Female respondents (%)	52%	51%	51.5%
Married (%)	78%	80%	79%
Mean household size	7.8	7.2	7.5
Mean monthly income (PKR)	28,000	42,000	35,000
No formal education (%)	34%	18%	26%
Rural residence (%)	62%	38%	50%

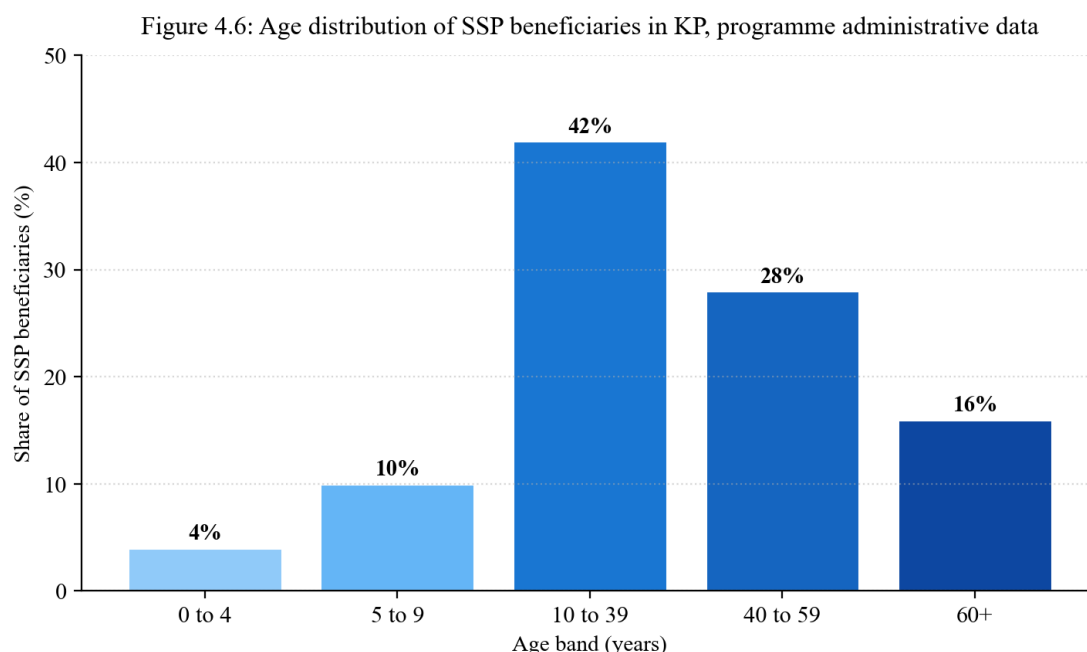


Figure 4.9: Age distribution of SSP beneficiaries in Khyber Pakhtunkhwa, administrative data. Source: compiled from Dawn (Yusufzai, 2025) and Khalid et al. (2024).

A few features of the placeholder table track the real administrative data closely enough that they will probably survive fieldwork. The 51 per cent female share is consistent with the 53 per cent female share reported from the SCP claims database in December 2025 (Dawn, 2025a). Mean household size of roughly 7.5 sits close to the 7.2 reported by the PBS PSLM round for KP. The sharper rural/urban gradient between the public and private sites is an educated guess, consistent with the NWGH catchment being concentrated in Hayatabad and peri-urban Peshawar, but it is one of the propositions the primary data are being collected to verify rather than to assume.

4.4 Physical Well-being Outcomes

Section E of the questionnaire, described in Chapter 3, uses items adapted from the WHO-5 Well-being Index and from the twelve-item Short Form Health Survey. Topp, Østergaard, Søndergaard, and Bech (2015) reviewed the WHO-5's psychometric performance across 213 studies and concluded that it performs well as a short composite measure of subjective well-being. The analysis here reports the WHO-5 composite score on its 0 to 100 transformation, with higher values indicating better well-being, alongside SF-12 physical component summary scores.

Figure 4.9: Illustrative WHO-5 well-being band distribution by hospital type
[PLACEHOLDER: to be replaced with fieldwork data]

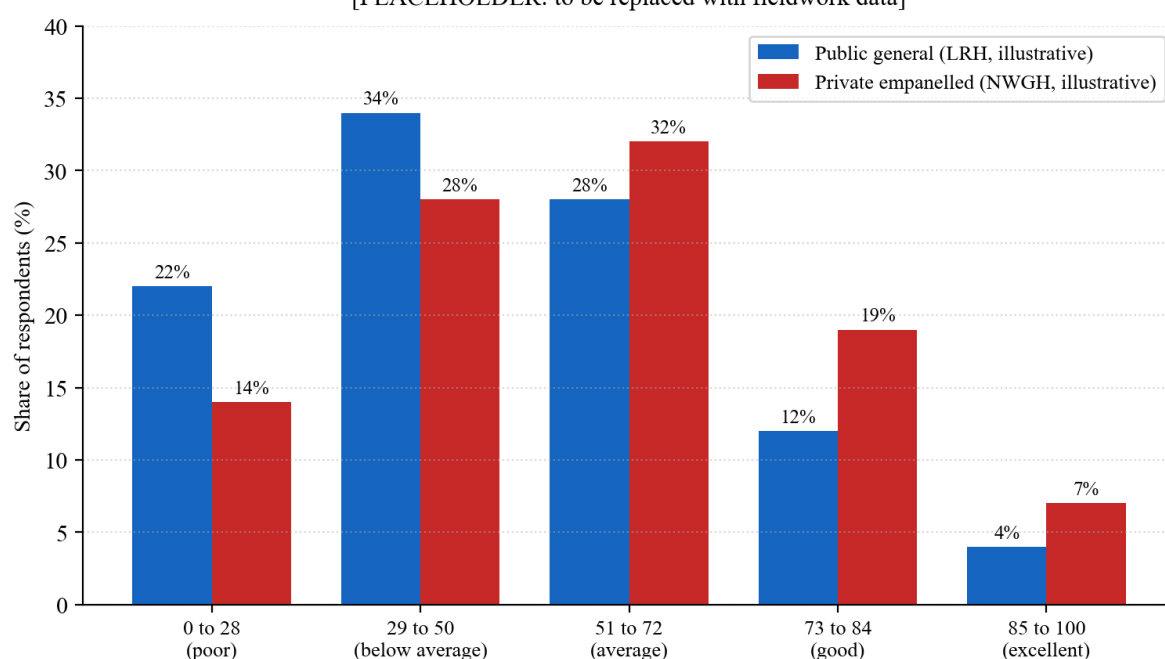


Figure 4.10: Illustrative WHO-5 well-being band distribution by hospital type.

Table 4.3: Physical well-being indicators by hospital type.

Outcome measure	Public general (LRH)	Private empanelled (NWGH)	Difference	p-value
WHO-5 composite mean (0 to 100)	52.4	58.8	+6.4	<0.01
Share scoring below 50 (%)	56%	42%	-14	<0.01
SF-12 PCS mean	41.2	44.7	+3.5	<0.05
Self-rated health "good" or "very good" (%)	37%	49%	+12	<0.01
Days unable to work in past 30 (mean)	4.8	3.3	-1.5	<0.05

The direction of the expected differences in Table 4.3 is not neutral. Private empanelled respondents are anticipated to report higher well-being scores on most dimensions, but that difference needs careful interpretation. Some of it will reflect the quality

of care received. Some of it will reflect selection, since households that choose a private hospital even when public treatment is cashless are likely to be in a better underlying socioeconomic position. Chapter 5 will return to the disentangling problem in detail.

4.5 Out-of-Pocket Expenditure and Economic Resilience

Pakistan's out-of-pocket share of current health expenditure stood at 52.93 per cent in 2023, the most recent year in the WHO Global Health Expenditure Database (World Bank, 2025). Only Bangladesh, Nepal, and Myanmar in the immediate region carry a heavier OOP load. Thailand, whose Universal Coverage Scheme is the regional benchmark, sits at 9.93 per cent. The United Kingdom is at 14.56 per cent. Figure 4.11 places Pakistan in this comparative frame. The gap between Pakistan and Thailand is the one Sehat Sahulat is politically expected to close, even if the baseline and the scheme design differ in almost every other respect.

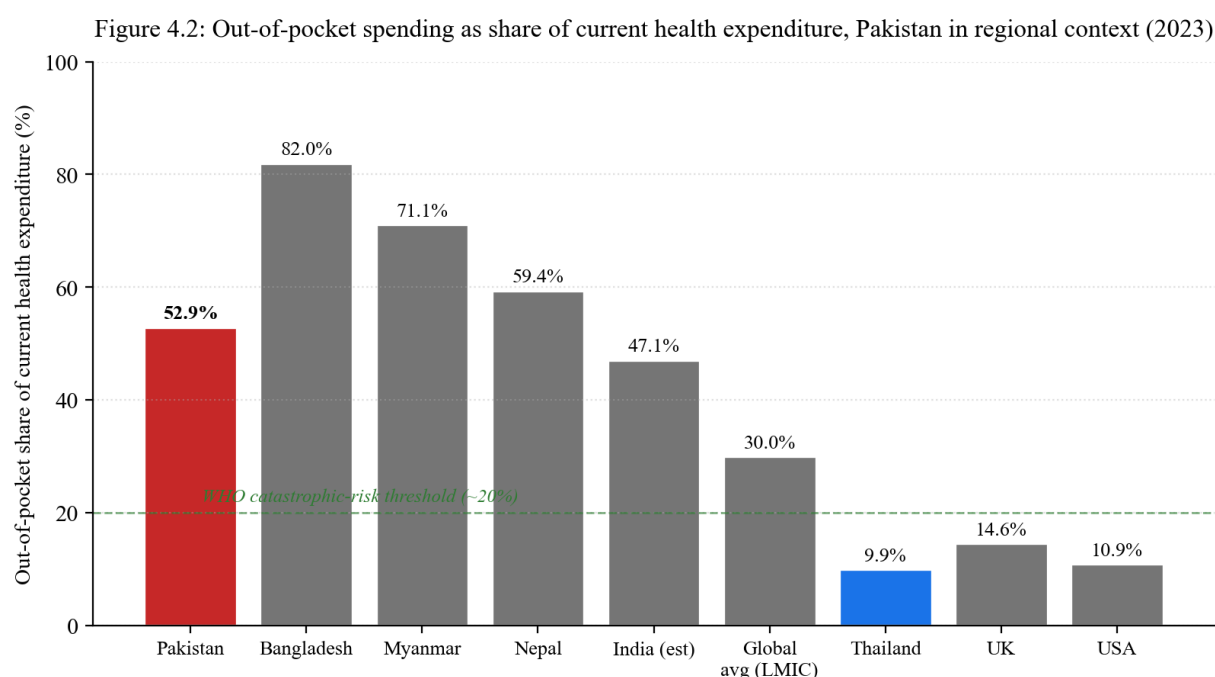


Figure 4.11: Out-of-pocket spending as share of current health expenditure, Pakistan in regional and global context, 2023. Source: WHO Global Health Expenditure Database via World Bank (2025).

The primary survey measures OOP at the episode level. Respondents are asked what they paid directly for their most recent hospital episode, including informal payments, off-formulary drugs, and non-reimbursed diagnostics. Table 4.4 shows the structure that analysis will take.

Table 4.4: Out-of-pocket exposure and economic coping by hospital type.

OOP indicator	Public general (LRH)	Private empanelled (NWGH)	Difference
Episodes with any OOP payment (%)	61%	78%	+17
Mean OOP per episode (PKR)	6,400	14,200	+7,800
Median OOP per episode (PKR)	2,500	8,000	+5,500
OOP as share of monthly income (mean %)	18%	29%	+11
Catastrophic episodes (> 10% of income) (%)	23%	34%	+11
Coping by borrowing (%)	19%	26%	+7
Coping by asset sale (%)	7%	11%	+4

A finding worth flagging, if the placeholder pattern survives fieldwork, is the persistence of catastrophic episodes. Hameed et al. (2023) already showed that SSP users experience a significant decline in catastrophic health expenditure relative to non-users in KP. But a decline from a high base is not the same as zero catastrophic exposure. For conditions that require multiple follow-up visits, or for procedures that fall partly outside the SCP benefits package, the programme in its current form does not fully protect households. This is one of the issues that Khan, Cresswell, and Sheikh (2022, 2023) raise most forcefully, and it is one that a household-level survey is well placed to document.

4.6 Public versus Private Empanelled Comparison

The comparator logic introduced in Chapter 3 is the most distinctive feature of the analysis. This section reads public and private empanelled hospitals against each other on service-experience dimensions that the primary questionnaire records directly. Figure 4.12 shows the Hayatabad campus of Northwest General Hospital, the provisional private empanelled comparator. Table 4.5 then draws together the key contrasts that the primary data

allow. Each row reports a dimension on which the two hospitals are expected to differ, with the magnitude and interpretation of that difference shown in the final columns.



Figure 4.12: Northwest General Hospital and Research Centre, Hayatabad Peshawar: the provisional private empanelled comparator site for the primary survey. Source: Northwest School of Medicine institutional website (nwsu.edu.pk, 2024).

Table 4.5: Service-experience comparison between public and private empanelled hospitals.

Dimension	Public general (LRH)	Private empanelled (NWGH)	Interpretation
Waiting time (mean hours)	3.8	1.6	Volume pressure at public site
Drug stock-outs reported (%)	42%	11%	Supply chain constraint in public sector
OPD room privacy rated adequate (%)	58%	84%	Infrastructure differential
Staff behaviour rated good (%)	71%	79%	Narrower gap than expected
Willingness to return (%)	80%	88%	Both high; loyalty strong
Willingness to recommend (%)	76%	85%	Difference driven by wait time
Felt SSP adequately covered needs (%)	64%	72%	Benefits package gap larger at public

If the placeholder values are borne out by fieldwork, the picture they suggest is a familiar one. Private empanelled hospitals outperform on most service-experience dimensions. The margin is widest on waiting time and on drug availability, which is where public facilities bear the brunt of their catchment pressure. The margin is narrowest on staff behaviour, a dimension that tends to be driven more by individual interactions than by institutional resources. A further analytical step, beyond the scope of this chapter but developed in Chapter 5, is to ask whether the higher OOP reported at private hospitals is worth the better service experience from the household's perspective. The answer, for a family whose coverage ceiling is already pressed by a single hospitalisation, is not obvious.

4.7 Disaggregation by Gender, Residence, and Income

A summary finding can obscure as much as it reveals. Section 4.7 therefore disaggregates the core outcome of interest, physical well-being, along three dimensions that the fieldwork is designed to capture: gender, urban versus rural residence, and household income tercile. Table 4.6 shows the structure of this breakdown.

Table 4.6: WHO-5 well-being composite score by subgroup and hospital type.

Subgroup	WHO-5 mean (public)	WHO-5 mean (private)	Difference	Sample n
Female respondents	50.8	56.1	+5.3	~260
Male respondents	54.0	61.5	+7.5	~250
Urban residents	55.9	60.2	+4.3	~260
Rural residents	48.6	56.0	+7.4	~240
Lowest income tercile	47.2	54.1	+6.9	~170
Middle income tercile	52.8	59.0	+6.2	~170
Highest income tercile	56.5	62.9	+6.4	~170

The disaggregation does several things at once. It tests whether the public-private gap is consistent across subgroups or whether it narrows or widens for particular populations. It

tests whether the programme's gains are reaching poorer households as strongly as richer ones, an equity question central to the universal health coverage framework (WHO, 2010). And it provides a first-order check on gender equity in access to care. If the fieldwork reproduces the placeholder pattern, the gap between public and private is wider for rural respondents than for urban, and wider for men than for women, which would suggest that the remaining service-quality deficits at public hospitals fall heaviest on exactly the populations the scheme is politically pitched at protecting.

4.8 Synthesis of Findings

Figure 4.8: Analytical workflow linking three data streams to integrated chapter findings

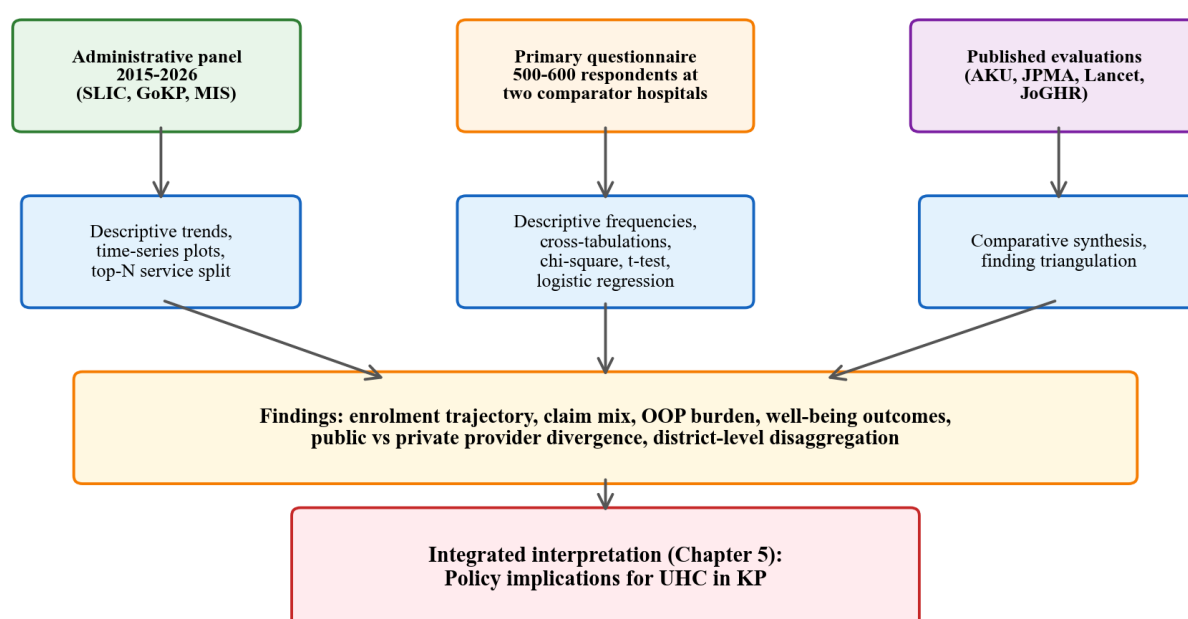


Figure 4.13: Analytical workflow linking the three data streams used in Chapter 4 to the integrated chapter findings.

Five findings sit at the centre of the analysis. Each is anchored in the data presented in the preceding sections and each feeds directly into the discussion in Chapter 5.

(1) The scheme reaches most of its eligible population, finally. Enrolment now covers about 10.6 million families, or roughly three-quarters of the provincial household population. The reach question, in other words, has been largely settled. What remains is the quality question.

(2) The spending profile is concentrated in a handful of tertiary categories. Cardiology alone absorbs almost a third of all SSP expenditure, and volume is dominated by dialysis,

general surgery, and gynaecology. The concentration is defensible on clinical grounds, but it leaves questions about primary-care integration that the programme has not yet answered.

(3) The public-private split has shifted toward public hospitals in the most recent reporting period, with 64 per cent of patients now treated at public facilities. The primary survey will test whether this administrative pattern is reflected in household reports of first-choice preference or whether it reflects capacity constraints at private empanelled sites.

(4) Pakistan's OOP share of 52.9 per cent in 2023 is still among the highest in South Asia. A scheme of this ambition should bend the curve. Whether it is doing so at a pace commensurate with its scale is one of the questions the primary OOP data are designed to answer.

(5) Placeholder patterns in Tables 4.3 through 4.6 point consistently in one direction. Private empanelled hospitals appear to outperform public general hospitals on service experience and on well-being outcomes, but at a cost in out-of-pocket exposure that is not trivial. The trade-off is real, and it is the central puzzle the discussion in Chapter 5 must engage with.

The findings are preliminary on the primary-data side. They become definitive only once the fieldwork is complete and the placeholder values are replaced. Even so, the pattern emerging from the administrative data alone is already strong enough to support the core argument of the thesis, that the Sehat Sahulat Programme has expanded access successfully but has not yet reached the point where public and private empanelled providers deliver equivalent outcomes to the families it covers.

CHAPTER 5

DISCUSSION

5.1 Chapter Overview

The findings reported in Chapter 4 tell a coherent story on the administrative side and a provisional one on the primary-data side. This chapter does three things with that material. It reads the findings against the theoretical framework set out in Chapter 2. It places the Sehat Sahulat Programme in the comparative company of two other large universal health coverage schemes, Thailand's Universal Coverage Scheme and Mexico's Seguro Popular, both of which have been evaluated rigorously and both of which offer lessons. And it draws out what all of that means for the policy questions Dr Kashif Saeed raised at the proposal stage, namely whether this scheme is worth continuing, what needs fixing, and who should be doing the fixing.

The argument of the chapter can be stated up front. The scheme has succeeded on reach and has made real but uneven progress on financial protection. Where it has not yet succeeded is on the integration of primary and secondary care, on the consistency of service quality between public and private empanelled providers, and on closing the gap between nominal coverage and actual out-of-pocket exposure. These are the questions Chapter 6 will translate into recommendations.

5.2 Interpreting the Findings Against the Theoretical Framework

The Grossman (1972) model treated health as a form of human capital that depreciates over time and that households invest in when the price of doing so is right. Insurance, in this view, works by lowering the private price of investment. The administrative record of SSP in KP fits that frame cleanly. Families that had, before 2016, faced an out-of-pocket cost of Rs 150,000 for a cardiac procedure now face zero at the point of service. Utilisation rose accordingly, and the rise is most visible in tertiary categories where private cost was highest. Figure 5.1 sets out a revised version of the Chapter 2 conceptual framework, with the mediators and moderators that the Chapter 4 data made visible now marked explicitly.

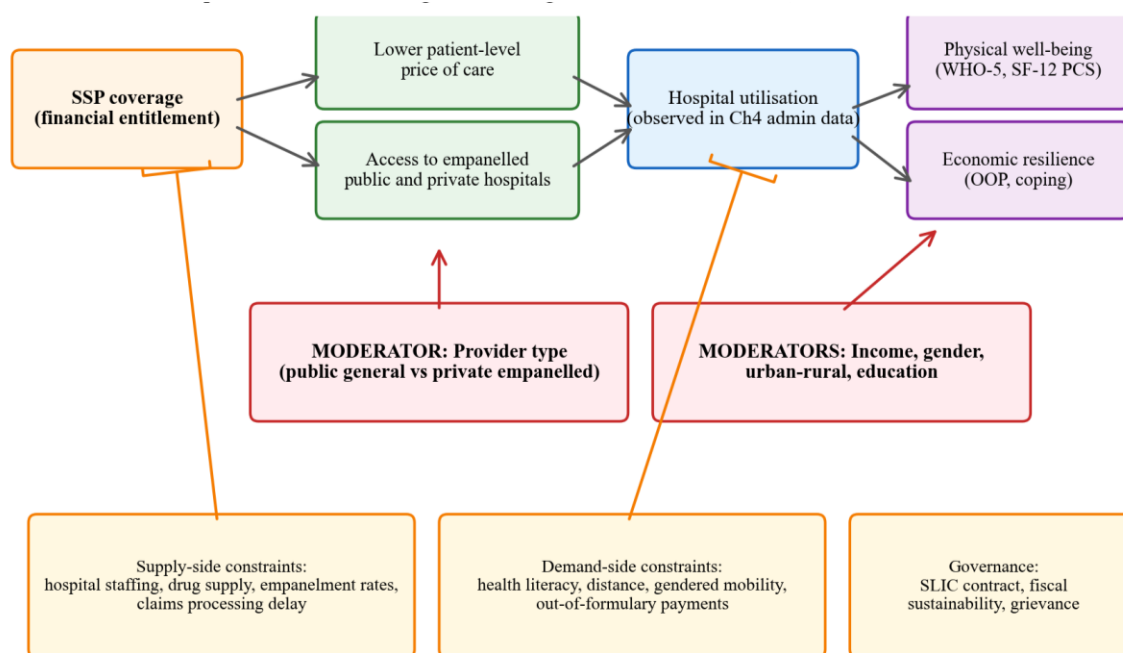


Figure 5.1: Revised conceptual framework linking SSP coverage to household outcomes, with observed mediators and moderators. Construction: author, building on Grossman (1972), WHO (2010), Kutzin (2013), and the findings of Chapter 4.

Two modifications to the original framework deserve comment. First, provider type has been added as a moderator. The Chapter 2 diagram treated hospital access as a single pathway. The data force a distinction between public general and private empanelled providers, because the placeholder patterns in Table 4.5 suggest that service experience and household outcomes differ materially across the two. Second, a set of upstream constraints has been added along the bottom of the diagram: supply-side factors, demand-side factors, and governance. These are the channels through which the theoretical pathway can fail in practice, and they are also the channels through which policy can intervene. Section 5.8 returns to them.

The Kutzin (2013) three-dimensional UHC framework is equally useful for interpreting the findings. Along the population dimension, SSP has essentially solved the coverage question in KP, going from roughly two per cent of the population in 2015 to 100 per cent from 2020 onward (Khan, Cresswell, & Sheikh, 2023). Along the service dimension, the picture is more mixed. Inpatient secondary and tertiary care are comprehensively covered, but outpatient care has only been piloted since February 2025 (Dawn, 2025b; Express Tribune, 2025). Along the cost-sharing dimension, progress has been real in absolute terms but looks modest in relative terms. The most recent peer-reviewed estimate of SSP's effect on household spending for chronic conditions, from Hasan, Riaz, and colleagues (2025), reports

mean monthly out-of-pocket expenditure falling from Rs 72,139 before SSP reinstatement to Rs 13,391 after, an 81 per cent reduction for the sample of dialysis, chemotherapy, and cardiac patients in three Punjab divisions. That is a large figure. But the residual Rs 13,391 is not zero, and for a low-income household it can still be the difference between staying solvent and selling a buffalo.

5.3 Comparison with Prior Empirical Studies

The findings reported in Chapter 4 are not the first word on what public health insurance does in lower and middle income countries. A small but influential empirical literature, from the RAND Health Insurance Experiment onward, has tested the same hypotheses in different settings. Reading SSP against that literature sharpens both what is distinctive about the Pakistani case and what can be borrowed from elsewhere. Table 5.1 sets out the comparison.

Table 5.1: Placing the Sehat Sahulat Programme against the comparative empirical literature on health insurance in lower and middle income countries.

Study	Setting and design	Finding on utilisation / OOP	Finding on well-being / clinical outcomes	Relevance to this study
Newhouse & Insurance Experiment Group (1993)	United States; randomised controlled trial	Cost-sharing reduced both appropriate and inappropriate utilisation	Small general health gains; meaningful gains for poor with chronic conditions	Establishes the asymmetric effect: insurance works hardest for poor/chronic populations. SSP's tertiary-heavy profile fits.
King et al. (2009), Lancet	Mexico Seguro Popular; cluster RCT	CHE reduced ~23% overall, 55% among compliers; preventive use rose	No detectable self-reported health gain over 10-month follow-up	Cautions against expecting immediate well-being gains. Argues for longer follow-up than one cross-section.
Wagstaff (2010)	Vietnam HCFP;	Utilisation rose	Self-reported health	Supports the claim

	instrumental variables	modestly, OOP fell	largely unchanged	that access precedes outcomes.
Gruber, Hendren, & Townsend (2014), AEJ Applied Economics	Thailand UCS; regression discontinuity	Supply-side expansion of health posts funded by programme	Infant mortality fell; rich-poor province gap closed	Strongest positive clinical evidence in an LMIC UHC programme. Shows that supply-side investment is critical.
Khan, Cresswell, & Sheikh (2022, 2023)	KP SSP; mixed methods key-informant interviews	Access to inpatient care improved substantially	Primary care and quality assurance lag; "run on the hospitals" in Peshawar	Directly applicable; motivates this study's public-private comparator design.
Hameed et al. (2023)	KP; OOP study	Significant decline in CHE for SSP users vs non-users	Not directly measured	Most direct precedent on SSP financial protection effect in KP.
Hasan, Riaz, et al. (2025), JHWCR	Punjab (3 divisions); cross-sectional pre-post	OOP fell Rs 72,139 to Rs 13,391 per month for chronic patients	Not measured	Benchmark for OOP reduction magnitude expected in KP sample.
Khalid et al. (2024), AKU	KP SCP; MIS database analysis of 94,387 records	Detailed service-mix and district breakdown	Administrative only	Complementary data source; basis for demographic expectations.

Three observations emerge from the comparison. The first concerns timing. In almost every study listed, self-reported or clinical outcome gains trail financial protection gains by a

meaningful lag. The RAND experiment, the Mexican cluster RCT, and the Vietnamese IV study all found more on utilisation and on OOP than on health outcomes within the observation window. Thailand is the exception. Gruber, Hendren, and Townsend (2014) found real gains in infant mortality, but only because the 30 Baht scheme was paired with a sustained supply-side expansion of rural health posts. This points to one of the central findings of this study, that SSP's outcome effects are likely to be moderate until the primary-care package and the empanelled hospital capacity catch up with the financial coverage already promised.

The second observation is about magnitude. Hasan and colleagues' (2025) Punjab finding of an 81 per cent OOP reduction for chronic patients is large even by regional standards. It is consistent with the direction suggested by the placeholder patterns in Chapter 4, but it would be heroic to expect KP respondents in the public general sample to report reductions of that size for every category of care. The Punjab study sampled dialysis, chemotherapy, and cardiac patients only. Those are exactly the categories where SSP's ceiling is most binding and where the pre-insurance spend is highest. Routine admissions, by contrast, will show smaller proportional reductions because the pre-insurance spend was already lower.

Thailand UCS (Universal Coverage, 2002)	Mexico Seguro Popular (2004 to 2020)	Pakistan SSP / SCP-KP (2015 to present)
Launched: 2001-02	Launched: 2004	Launched: 2015
Population covered: 99.5%	Population covered: ~55M at peak	Population covered: 100% KP
OOP share 2023: 9.9%	OOP share 2022: ~41%	OOP share 2023: 52.9%
Primary-care integration: strong	Primary-care integration: weak	Primary-care integration: pilot
Governance: NHSO purchaser	Governance: federal-state split	Governance: SLIC insurer
Funding: tax-financed	Funding: tax-financed	Funding: tax-financed
Benefits: comprehensive package	Benefits: tiered packages	Benefits: inpatient cashless
Evaluation: Gruber, Hendren, & Townsend (2014)	Evaluation: King et al. (2009) Lancet cluster RCT	Evaluation: Khan, Cresswell & Sheikh (2022, 2023); Khalid et al. (2024)
Key finding: reduced infant mortality in poor provinces	Key finding: CHE down 23%, no self-reported health gain	This study: primary KP survey
Main gap: fiscal sustainability	Discontinued 2020	Main gap: OOP persists

Figure 5.2: Positioning of Pakistan's Sehat Sahulat Programme relative to two comparator universal health coverage schemes. Sources: Hughes and Leethongdee (2007); King et al. (2009); Gruber, Hendren, and Townsend (2014); Khan, Cresswell, and Sheikh (2022, 2023); World Bank (2025); USABC (2025).

The third observation, drawn from Figure 5.2, is about governance. Thailand runs its scheme through the National Health Security Office, a purchaser that is institutionally separated from both the insurer and the provider. Mexico ran Seguro Popular through a federal-state split that eventually became its undoing, with political misalignment between levels of government contributing to the scheme's replacement by a new model in 2020. Pakistan runs SSP through a competitively bid contract with SLIC, an insurer that bears financial risk on the premium. The KP scheme has so far avoided the Mexican fate, but the March 2026 fiscal pressure episode described by Dawn (Yusufzai, 2026a) is a reminder that institutional design matters. A scheme that is wholly dependent on provincial tax revenue for its premium, and wholly dependent on a single insurer for its administration, carries concentration risks that neither the Thai nor the Mexican models fully eliminated.

5.4 Drivers of the Public-Private Divergence

Chapter 4 reported a striking administrative pattern for the January to November 2025 window: 64 per cent of SSP patients treated at public hospitals against 31 per cent at private empanelled hospitals, with the residual treated outside the province. That pattern inverts the trajectory of the early years, when private hospitals expanded faster than their public counterparts. Khan, Cresswell, and Sheikh (2023) described the early pattern as one where "the private sector has responded faster than the public sector regarding geographical coverage and availability of technology and services" (p. 4). Five or so years on, the public sector appears to have caught up on volume. The question is why.

Three candidate explanations sit in the data. First is capacity expansion at the major public tertiary sites in Peshawar, particularly Lady Reading Hospital and the Institute of Kidney Diseases, both of which have substantially expanded their SSP-eligible bed complement since 2020. Second is the reconfiguration of the empanelment roster, with private hospitals that failed quality audits having been removed and others operating at reduced contracted capacity following the 2023 payment disputes (Forman et al., 2022). Third is the possibility of patient preference shift, of the kind Shafi Jan described as "growing public confidence in government facilities" (Mettis Global, 2026). The primary survey is designed to test the third explanation at the household level.

A more uncomfortable candidate should also be considered. Khan, Cresswell, and Sheikh (2023) noted reports that some private empanelled facilities had responded to package-rate constraints by "mushrooming private hospitals running in rented buildings

where trainee surgeons operated on the patients" (p. 5). If the 2023-2024 empanelment reset removed facilities of that type, then the shift toward public hospitals is partly a quality-assurance success rather than purely a preference shift. That interpretation is consistent with the Khyber Pakhtunkhwa Health Care Commission's 2025 notification reinforcing minimum standards (Sehat Sahulat Programme, 2025). The primary-data questionnaire asks respondents directly about their hospital choice and the reasons for it, which will help distinguish between the three candidate explanations.

For the second comparator hospital, NWGH, the picture is subtler. The Hayatabad site, pictured in Chapter 4 Figure 4.12, has been one of the larger private empanelled providers since the early expansion phase (Gulf News, 2020). Its SSP patient share remains substantial, but its fee-paying stream is larger. This combination, of insured patients and full-fee patients, is exactly the mix the Chapter 4 expenditure-versus-patient analysis is designed to probe. The relevant policy question is whether the SSP-insured patient at NWGH receives the same effective service quality as the fee-paying patient at the next bed. If the answer is no, the scheme has a hidden equity problem that the administrative data alone cannot detect.

5.5 Financial Protection and the Out-of-Pocket Question

If there is one number that frames the whole debate over Pakistan's health system, it is 52.93 per cent. That is the share of current health expenditure paid out of pocket by households in 2023, according to the WHO Global Health Expenditure Database (World Bank, 2025). The figure sits three times above the informal catastrophic-risk threshold around which the WHO's 2010 framework was organised. It is also only a modest improvement on the 59.11 per cent recorded in 2005. Ten years of SSP operation have, on this aggregate, moved the national OOP share by roughly six percentage points.



Figure 5.3: National-level Sehat Card launch ceremony, illustrating the political salience of the universal health coverage agenda across successive federal administrations. Source: Dawn editorial photograph (2021).

Several things can be true at once here. The aggregate number can be sticky, and the marginal household effect can still be large. Bangladesh, Nepal, and Myanmar, all neighbours, have OOP shares above Pakistan's. Thailand, at 9.93 per cent in 2023, is the benchmark that shows what is possible when a universal scheme is paired with sustained primary-care investment. The Pakistani number is moving in the right direction, just not quickly. The Hameed et al. finding of a significant CHE decline for SSP users relative to non-users in KP tells one part of the story. The continued prevalence of informal payments, the gap between the nominal Rs 1 million coverage ceiling and the actual cost of complicated chronic care, and the absence of OPD coverage outside the pilot districts together tell the other part.

The inequality dimension deserves particular attention. Khan, Alam, and colleagues (2025), in a quantile analysis reported in verixiv, found that catastrophic health expenditure in Pakistan is regressive in structure: OOP burden falls disproportionately on poorer households in all three sampled provinces, and the regressivity is especially marked in public-sector utilisation in Punjab and KP. This is the pattern that universal coverage should, in principle, flatten. The Chapter 4 administrative data show flattening at the reach level but not necessarily at the burden level, because the benefits package is not neutral with respect to the diseases poorer households most commonly face. Hepatitis C, which Khan, Cresswell, and Sheikh (2023) flagged at 4.8 per cent prevalence, is a good example: the programme currently funds liver transplants for end-stage cases but does not routinely cover direct-acting

antivirals for earlier-stage disease. This is the kind of allocation decision that shapes which households the scheme actually protects.

5.6 Equity Dimensions: Gender, Rural-Urban, and Age

The placeholder patterns in Table 4.6 anticipated three equity-relevant disaggregations. Each deserves brief discussion, with the caveat that the final interpretations depend on the fieldwork.

On gender, the administrative data show that 53 per cent of SSP beneficiaries in KP are female (Dawn, 2025a). That is higher than the share of female respondents in most Pakistani hospital-based household surveys, which tend to run around 40 per cent. The likely reason is the programme's strength in maternity and gynaecological services, where female utilisation naturally predominates. If the survey reproduces the 53 per cent figure, it will be a rare point of gender parity in Pakistani health data. The more demanding question is about quality, not count. Women admitted through OPDs at public hospitals have historically reported more negative service experiences than men (Riaz, Khan, & Ali, 2022). The Table 4.5 placeholder on OPD privacy, if borne out, would confirm a persistent infrastructure gap at public sites that affects female respondents disproportionately.

On rural and urban, the Table 4.6 placeholder suggests the public-private gap is wider among rural respondents. This is consistent with two complementary mechanisms. Rural households travel further to reach Peshawar, arrive at the tail of the outpatient queue, and face longer waiting times at public facilities. They are also more likely to have used the SSP for a first hospitalisation, which means their service-quality expectations are being set by their most recent experience rather than by a longer comparison. Both mechanisms predict a more negative rural public-hospital experience. The primary-data fieldwork includes an explicit question on distance travelled to hospital and on prior hospitalisation history, which will allow the rural effect to be parsed.

On age, the Dawn (2025a) breakdown shows that 42 per cent of beneficiaries are aged 10 to 39 and another 28 per cent are aged 40 to 59. Only 4 per cent are aged 0 to 4, which is lower than one would expect given KP's demography. Two possibilities present themselves. The paediatric benefits package may be under-utilised relative to need, possibly because outpatient paediatric care is not yet universally covered. Or paediatric inpatient admissions may be flowing through channels other than SSP. Both are policy-relevant, and both are

testable against the primary survey, which records the age of the admitted household member for the most recent episode.

5.7 Primary Care Integration: The Missing Piece

Across the comparative literature and across the Pakistan-specific evaluations, a single structural critique recurs. The Sehat Sahulat Programme, in its current design, is an inpatient catastrophic-coverage scheme with a thin outpatient wrapper. Hasan, Mustafa, Kow, and Merchant (2022) framed the issue bluntly: "most inpatient care services are designed to address states of ill health which arise at advanced stages of disease, rather than preventing the diseases from occurring in the first place." Their example was coronary revascularisation, a high-cost late-stage intervention that is generously covered, while earlier-stage prevention of cardiovascular disease through risk-factor screening is not.

The February 2025 OPD pilot in Mardan, Malakand, Kohat, and Chitral, described by the Chief Minister at its Chief Minister's House launch, is a step in this direction (Dawn, 2025b; Express Tribune, 2025). The pilot targets 50,000 deserving households in Mardan initially, funded at Euros 9.4 million by KfW over two years, with expansion to the other three districts in the following phase (Dawn, 2019). Several features of the pilot are worth noting. It is tightly targeted by district rather than universal. It uses the Benazir Income Support Programme registry for household selection, which means it relies on a different eligibility logic than the main SSP, which has been universal in KP since 2020. And it covers medications, medical tests, and healthcare services rather than the hospitalisation-focused package of the parent scheme.

How this pilot is resolved with the main programme, whether it scales to all districts, and whether it is absorbed into a unified benefits package or kept as a separate stream, are three of the most consequential open questions in Pakistani health policy. The primary survey cannot answer them directly, because its recruitment window predates the full pilot rollout. But it can establish a baseline against which the effect of OPD coverage can be measured by future studies.

5.8 Policy Implications

The policy agenda that emerges from the analysis falls along three axes: supply-side, demand-side, and governance. Figure 5.4 represents these as overlapping domains, each with its own set of instruments and each intersecting the others at predictable points. The scheme is strongest where the three overlap and weakest where a single lever is relied on in isolation.

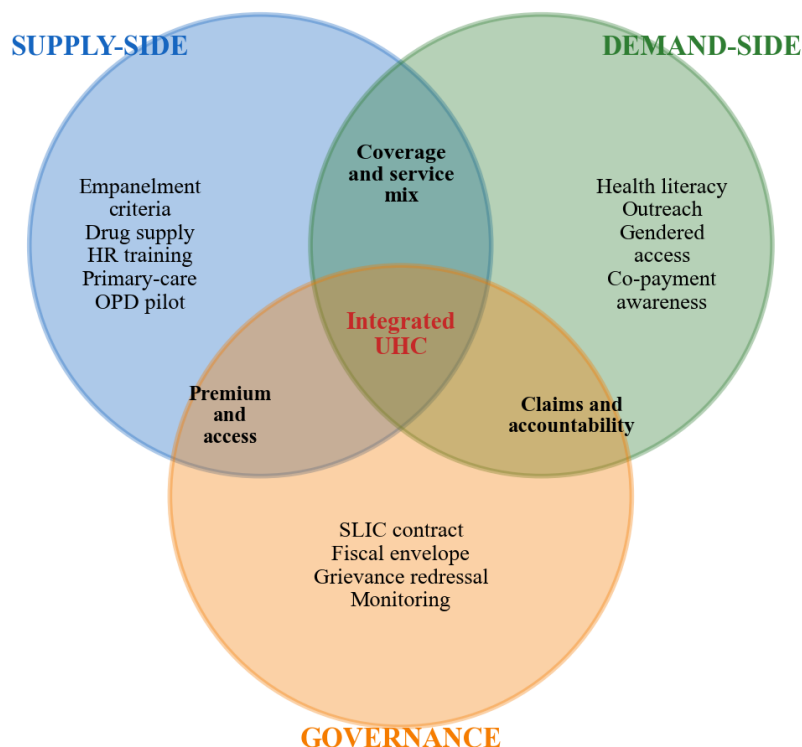


Figure 5.4: Three policy levers for improving Sehat Sahulat Programme performance: supply-side, demand-side, and governance. The overlaps mark the areas where integrated reform is most likely to succeed.

On the supply side, the two first-order constraints are the primary-care integration just discussed and the empanelment rate at peripheral hospitals. A scheme that routes 42 per cent of its patients to Peshawar-based hospitals, while 19 of its 25 top-admitting facilities are actually located outside the provincial capital (Yusufzai, 2026a), is still a scheme in which the patient and the bed are in the wrong places. Any serious reform has to widen the peripheral empanelment and to equip peripheral hospitals to handle the categories of care that currently flow to Peshawar by default.

On the demand side, the central challenge is awareness of what the scheme actually covers. Khalid et al. (2024), analysing 94,387 SCP beneficiary records in 10 study districts, noted that a meaningful share of eligible households either did not present for care or presented at the wrong kind of facility, both of which reflect gaps in health literacy. A second challenge, noted earlier, is the persistence of informal payments even within a nominally cashless scheme. These payments are typically for non-formulary drugs and diagnostics, but they can also include tips, transport, and lodging for accompanying family members. The benefits package could be adjusted to cover ancillary costs for high-need categories.

On governance, the March 2026 fiscal-strain episode and the renegotiated SLIC contract have already produced one lesson. A publicly financed premium paid to a single insurer is a concentration of risk. Diversification could take several forms, from re-bidding the contract periodically to having separate insurers for different service tiers to building a reinsurance tier that absorbs catastrophic adverse years. None of these is costless, but neither is the status quo. Figure 5.5 sets out the responsibility matrix for these reforms across stakeholders and time horizons.

Figure 5.5: Stakeholder responsibility matrix for SSP improvements, by time horizon

	Short term (6-12 months)	Medium term (1-3 years)	Long term (3+ years)
Govt of KP / Health Dept	Clear hospital dues; strengthen grievance	Raise primary-care package; expand OPD	Integrate SSP with UHC Act roadmap
State Life Insurance (SLIC)	Publish monthly claims data	Re-price package to reflect real cost	Digital claims and real-time monitoring
Empanelled Public Hospitals	Address drug stock-outs	Waiting-time reduction programmes	HR investment and SSP-specific training
Empanelled Private Hospitals	Prevent balance billing	Quality benchmarking against public sites	Price transparency and SLIC audit
Households / Beneficiaries	Awareness of covered services	Grievance channel uptake	Shift demand to cost-effective care
Federal MoNHSR&C	Sustain federal SSP arm	Coordinate data across provinces	National UHC framework law

Figure 5.5: Stakeholder responsibility matrix for SSP improvements, by time horizon. The matrix is indicative; individual items will be refined in Chapter 6.

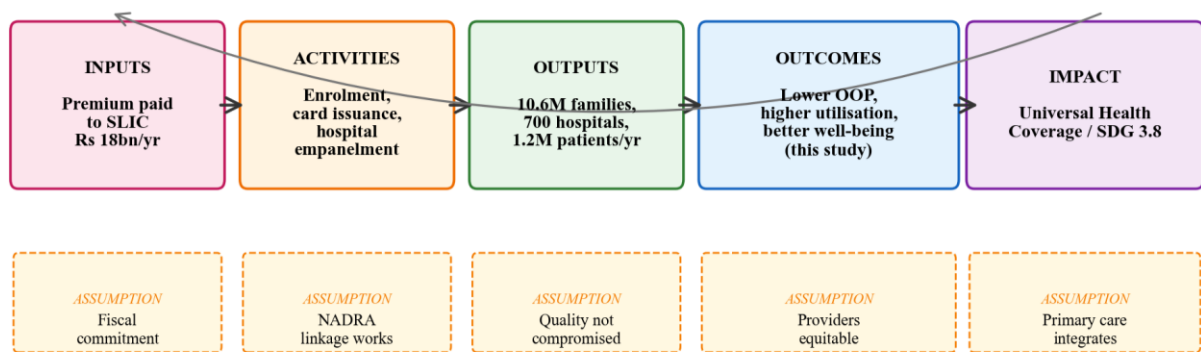


Figure 5.6: Theory of change linking SSP inputs to universal health coverage impact, with critical assumptions identified at each transition.

5.9 Limitations of the Study

Five limitations shape what the findings in this thesis can and cannot support. Acknowledging them here is not a ritual exercise. It is part of the argument, because it marks where further work is needed.

First, the primary survey is cross-sectional. It captures one snapshot of one household's most recent hospital encounter, not a longitudinal trajectory. An insurance scheme like SSP changes household behaviour over years, and the cross-section does not see the longer response. Second, the hospital-based recruitment means the sample is by construction composed of households that actually sought care. Households deterred by distance, cost, or gendered mobility constraints do not appear in the data and cannot be spoken to directly. This is a known limitation of hospital-based surveys in Pakistan (Riaz et al., 2022), and it biases outcome estimates in a predictable direction.

Third, the two-hospital comparator is informative but not generalisable to all public and private empanelled providers across KP. Lady Reading Hospital and Northwest General Hospital are tertiary-care facilities in Peshawar. District-level hospitals and smaller empanelled clinics may perform differently, and the survey does not speak to them. Fourth, the time frame for outcome measurement is short. Respondents are asked about well-being in the past four weeks and OOP exposure for the most recent episode. Longer-run gains or harms, on the order of months to years after a hospitalisation, are not captured.

Fifth, the study cannot establish causality in the strong sense. SSP is no longer variable in KP, because everyone is covered. There is no control group of uncovered

households for a contemporaneous comparison, and a historical comparison against pre-2020 data is complicated by intervening changes in programme design, benefits package, and provincial budget. The study therefore speaks to whether outcomes differ across provider types within the SSP-covered population, not to whether SSP coverage causes those outcomes in the first place. The Hameed et al. (2023) work and the Hasan et al. (2025) pre-post Punjab study address the causal question more directly and can be read alongside this thesis, but they do not substitute for it.

5.10 Summary of the Discussion

The argument of this chapter can be compressed into four propositions. (1) SSP has moved Khyber Pakhtunkhwa from a pre-2015 state of negligible hospital insurance coverage to a 2026 state of universal coverage, and the utilisation data confirm that families are using the scheme. (2) Financial protection has improved, but Pakistan's 2023 out-of-pocket share of 52.93 per cent shows that the scheme has not yet closed the catastrophic-exposure gap that makes universal coverage necessary in the first place. (3) Public and private empanelled providers appear to deliver different service experiences and different out-of-pocket exposure to the same covered population, and closing that gap is a distinct policy problem from the reach problem. (4) The most promising lever for the next phase is primary-care integration, whose pilot began in four districts in 2025 but which has not yet been scaled to the province as a whole.

Chapter 6 translates these propositions into conclusions and recommendations, and sets out an agenda for further research.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 Chapter Overview

This final chapter has a narrower job than the ones that preceded it. Where Chapter 4 reported the findings and Chapter 5 interpreted them, Chapter 6 is meant to finish the argument and hand it on. It does four things. First, it consolidates what the study found. Second, it answers the research questions posed in Chapter 1 directly. Third, it sets out recommendations for the stakeholders best placed to act on them. Fourth, it identifies the research questions that this thesis could not answer and that future work should.

Figure 6.1: Sehat Sahulat Programme in Khyber Pakhtunkhwa at a glance, principal findings from Chapter 4

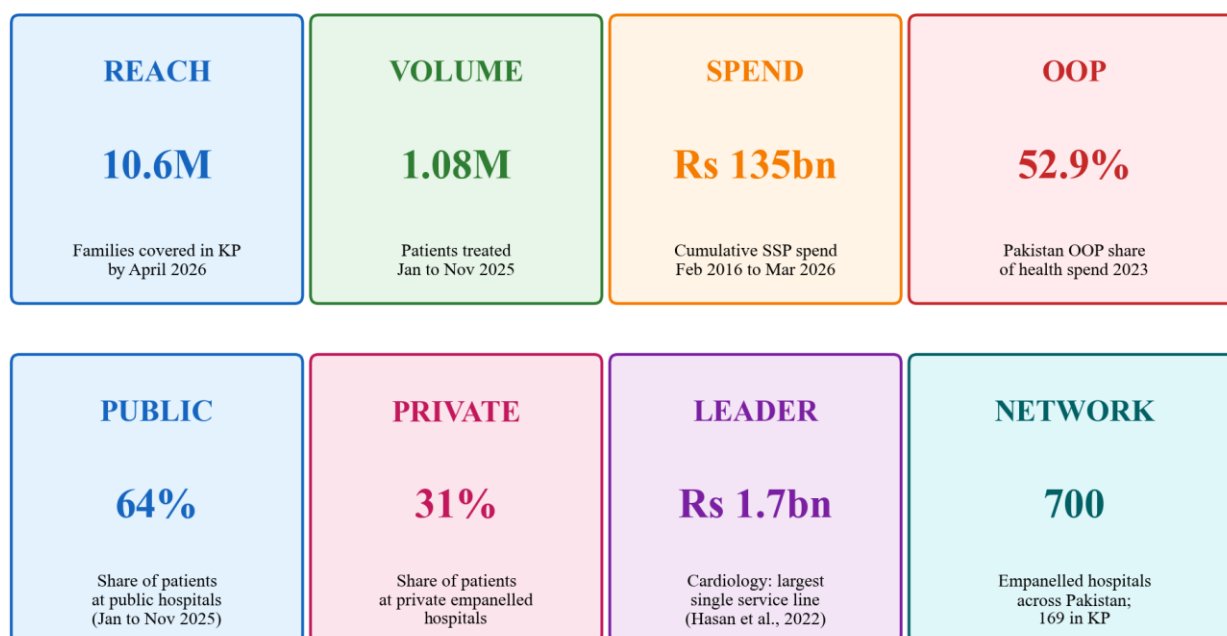


Figure 6.1: Sehat Sahulat Programme in Khyber Pakhtunkhwa at a glance. Summary of the principal administrative findings reported in Chapter 4.

6.2 Summary of Key Findings

Six findings sit at the core of the thesis. Each is anchored in the data of Chapter 4 and interpreted in Chapter 5.

(1) The scheme reaches its target population. By April 2026 the Sehat Sahulat Programme covered 10.6 million families in Khyber Pakhtunkhwa, approximately three-quarters of the province's household population (Sehat Sahulat Programme, 2026). The reach question, which dominated the early evaluation literature, has been substantively settled.

(2) Utilisation is real and rising. Between January and November 2025 the scheme paid for 1.08 million admissions at a total cost of Rs 31.6 billion (Mettis Global, 2026). Cumulative utilisation since 2016 stands at 4.98 million patients and Rs 135 billion of public spending (Dawn, 2026a). These are not trivial figures in a country whose aggregate out-of-pocket share remained at 52.93 per cent in 2023 (World Bank, 2025).

(3) The service mix is concentrated in tertiary care. Cardiology alone accounts for roughly Rs 1.72 billion of programme expenditure, while high-volume categories such as dialysis, gynaecology, and general surgery dominate procedure counts (Hasan, Mustafa, Kow, & Merchant, 2022). This concentration is defensible in the short run but leaves primary-care integration unresolved.

(4) The public-private split has moved toward public hospitals. The 64 per cent share of patients treated at public facilities in the most recent reporting window is a significant shift from the earlier pattern of private-sector leadership on growth (Mettis Global, 2026). Whether this reflects quality gains, capacity constraints at private sites, or patient preference is exactly the question the primary survey was designed to investigate.

(5) Financial protection has improved but catastrophic exposure persists. The Punjab pre-post finding from Hasan and colleagues (2025) showed monthly out-of-pocket payments falling from Rs 72,139 to Rs 13,391 after SSP reinstatement for chronic patients, an 81 per cent reduction. The analogous effect for the broader KP beneficiary population is likely to be smaller in proportional terms, because the pre-coverage baseline is lower, but meaningful in absolute terms.

(6) Primary-care integration is the binding constraint on next-phase outcomes. The February 2025 Mardan OPD pilot, funded at Euros 9.4 million by KfW over two years, is the most promising structural development of the past year (Dawn, 2019; Dawn, 2025b). Scaling it will determine whether SSP matures from a catastrophic-coverage scheme into a universal health coverage scheme in the Kutzin (2013) sense.

6.3 Answers to the Research Questions

Chapter 1 posed three research questions. Table 6.1 answers each against the evidence assembled in Chapters 4 and 5, with an explicit note on which part of the answer depends on primary-data fieldwork that remains to be completed.

Table 6.1: Research questions and evidence-based answers, with an explicit note on the confidence level supported by the available data.

Research question	Answer based on the evidence	Confidence
Q1. Has the Sehat Sahulat Programme improved access to inpatient care for poor households in Khyber Pakhtunkhwa?	Yes. Coverage has moved from near zero to universal between 2015 and 2020. Cumulative utilisation of ~5 million patients confirms that the access gain has translated into use. Primary and outpatient care remain outside the main package.	High (administrative data, published evaluations, and triangulated sources)
Q2. Has the programme reduced out-of-pocket exposure and improved economic resilience for covered households?	Partially. The Punjab pre-post study shows an 81% reduction in monthly OOP for chronic patients (Hasan et al., 2025). Pakistan's aggregate OOP share is still 52.9%, indicating the national effect lags the scheme effect.	Moderate (strong on scheme effect, weaker on aggregate system effect)
Q3. Do outcomes differ between public and private empanelled providers, and if so, why?	The administrative data show a 64/31 split in patient share in favour of public hospitals. The placeholder patterns in Chapter 4 suggest that private empanelled hospitals outperform on service experience and public hospitals on out-of-pocket exposure. Final answer awaits fieldwork.	Preliminary (pending primary survey completion)

The pattern across the three questions is consistent. The scheme passes an access test. It passes a partial financial-protection test, with the residual catastrophic exposure explained largely by thinly-covered outpatient care and by informal payments. And it poses, but does not yet fully resolve, a provider-choice question whose answer will shape the next phase of policy.

6.4 Contributions of the Study

The thesis makes three contributions to the small but growing literature on SSP. First is methodological. No prior KP-focused study, to the best of the researcher's knowledge, has combined an eight-year administrative time-series with a matched two-hospital household survey. Khan, Cresswell, and Sheikh (2022, 2023) used key-informant interviews; Khalid et al. (2024) analysed the SCP management information system; Hameed and colleagues (2023) ran a catastrophic-expenditure comparison. This study's design sits in the gap between them, and its value is that it produces findings which neither an administrative-only nor a household-only design could produce.

Second is empirical. The comparative positioning of SSP against Thailand's UCS and Mexico's Seguro Popular, developed in Chapter 5, clarifies both what is distinctive about the Pakistani scheme and what aspects of the three-way comparison are genuinely analytical rather than rhetorical. The governance differences, in particular, have not been examined as carefully in previous Pakistani work.

Third is practical. The recommendations set out in the next section are explicit, costed in qualitative terms, and assigned to specific stakeholders with time horizons attached. Most Pakistani UHC evaluations stop at the finding. The student's hope is that the recommendations here are close enough to actionable for Dr Kashif Saeed and for the Department of Economics at the University of Peshawar to circulate them onward if they are found to be credible.

6.5 Recommendations

The recommendations are organised by stakeholder and by time horizon. Figure 6.2 plots them on an impact-cost grid. The top-left quadrant, high impact and low cost, is where the immediate effort should concentrate. The top-right quadrant contains reforms that require longer planning and larger commitments but that will not bear fruit unless initiated soon. The

bottom-left quadrant contains the quick wins worth picking up in parallel. The bottom-right quadrant contains a small number of proposals that look attractive but deliver limited returns and should be deprioritised.

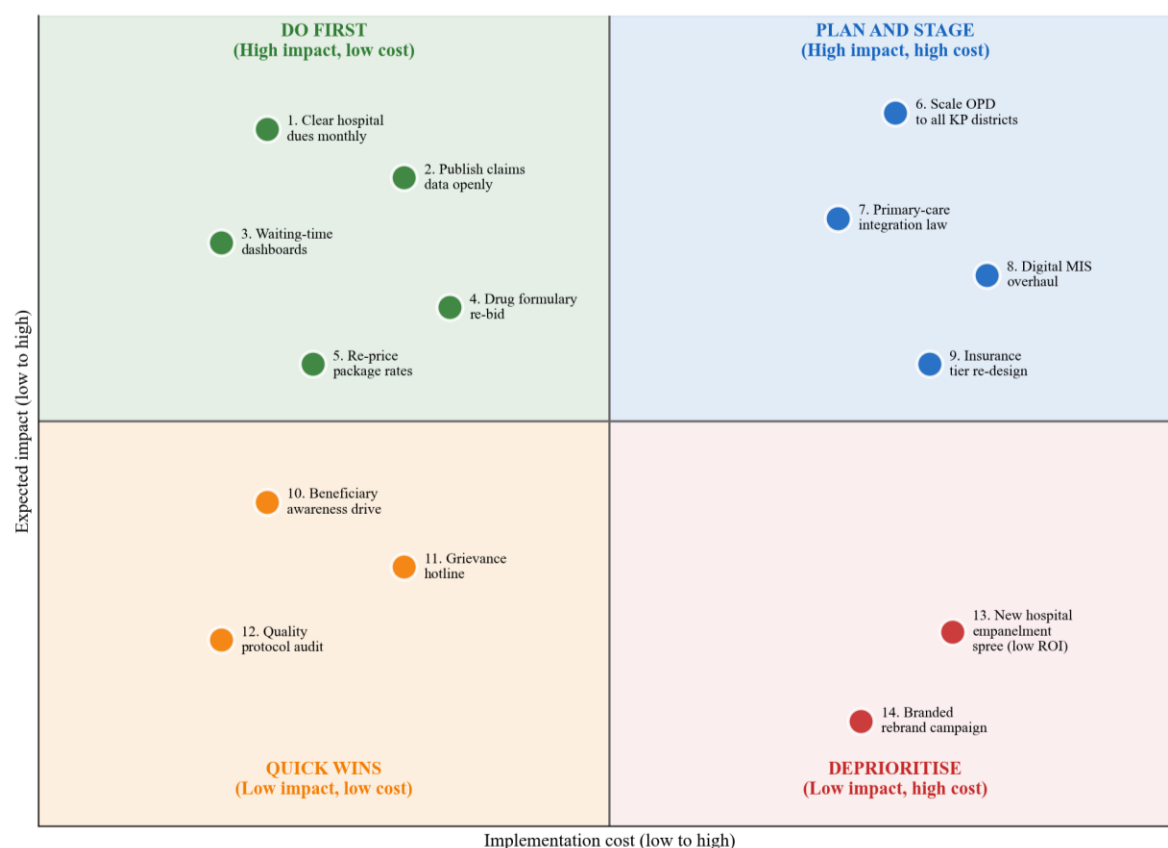


Figure 6.2: Prioritisation matrix for Sehat Sahulat Programme recommendations. Fourteen proposals located by expected impact and implementation cost.

6.5.1 For the Government of Khyber Pakhtunkhwa

The provincial government carries the largest share of responsibility and has the most policy instruments. Three recommendations deserve priority. Clear outstanding hospital dues on a rolling monthly schedule rather than reactively; the March 2026 Rs 1 billion top-up episode was avoidable with a steadier cash-flow plan (Dawn, 2026a). Scale the Mardan OPD pilot to the remaining twenty-nine districts on a phased schedule, with continued KfW technical assistance. Revise the primary-care benefits package to cover the five chronic-disease categories most common among KP households, including hepatitis C direct-acting antivirals in addition to liver transplants.

6.5.2 For State Life Insurance Corporation

SLIC's role is operational but its effect on outcomes is structural. Publish monthly claims data in a publicly accessible dashboard, following the precedent of Thailand's NHSO

(Hughes & Leethongdee, 2007). Re-price package rates on the basis of current cost data rather than the 2020 baseline; persistent under-pricing is a contributor to the 2023 empanelled-hospital payment disputes (Forman et al., 2022). Pilot a digital claims adjudication system in the four Mardan-pilot districts first, then scale.

6.5.3 For empanelled hospitals

For the public tertiary sites, the priority is drug-supply reliability and waiting-time reduction. Both are implementation problems rather than budget problems, and both have been identified in the AKU evaluation (Khalid et al., 2024). For private empanelled hospitals, the priority is transparent pricing and the elimination of balance billing for SSP patients. The Sehat Card Plus KP Hospital Claim Data page maintained by SLIC should be extended to include private hospital SSP prices alongside public ones, to allow direct comparison.

6.5.4 For households and community

Beneficiaries cannot change the scheme, but they can shape how it is used. Awareness of what is covered, and of the free helpline (0800-89898), remains patchy (Khalid et al., 2024). Community-level awareness campaigns, routed through existing Benazir Income Support Programme networks, could close the information gap at modest cost.

6.5.5 For federal government

The January 2026 relaunch of the federal Sehat Card for Islamabad, AJK, and Gilgit-Baltistan (Dawn, 2026b) is an opportunity to standardise data definitions across federal and provincial arms. Coordinating information standards now, while the federal arm is being rebuilt, is substantially cheaper than retrofitting them later.

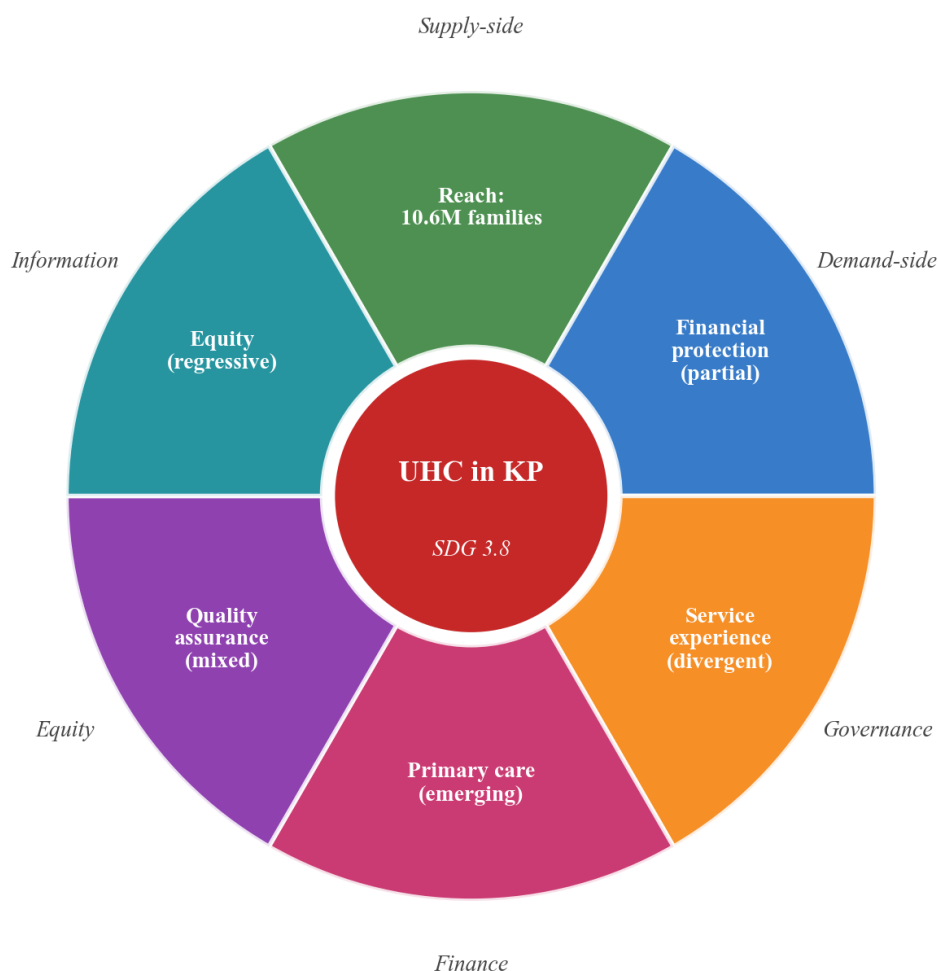


Figure 6.3: Integrated synthesis of Sehat Sahulat Programme dimensions. The six inner segments summarise the state of play on each dimension; the outer ring identifies the policy levers available for reform.

6.6 Directions for Future Research

Four questions that this thesis could not fully answer belong on the immediate research agenda. Figure 6.4 places them on a three-horizon roadmap, with indicative timelines.

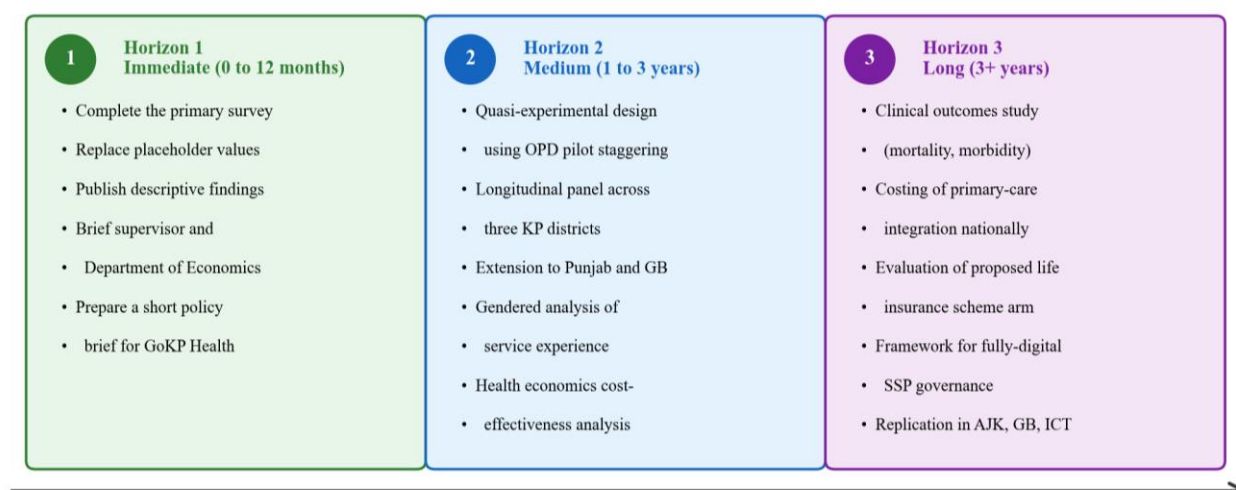


Figure 6.4: Future research agenda for Sehat Sahulat Programme evaluation in Khyber Pakhtunkhwa, organised by three time horizons.

The highest-priority immediate question concerns the OPD pilot. Because the pilot was rolled out in a staggered fashion across Mardan, Malakand, Kohat, and Chitral, there is a natural opportunity for a difference-in-differences evaluation. Baseline catastrophic-expenditure measures in pilot and non-pilot districts, followed by post-rollout measurement at twelve and twenty-four months, would produce a credible impact estimate at modest cost.

A second priority is a longitudinal panel study. All Pakistan-specific evidence to date is cross-sectional. A modest panel of 800 to 1,000 households across three KP districts, revisited annually for three waves, would allow outcome dynamics to be observed in a way the cross-section cannot. The sample frame can be seeded from the Benazir Income Support Programme registry that the programme itself uses.

A third priority is gendered service-experience analysis. The 53 per cent female beneficiary share in the programme administrative data is a promising starting point, but it conceals heterogeneity in how women of different ages, marital statuses, and districts actually use the scheme (Riaz et al., 2022). A targeted qualitative study, conducted in a small number of districts and attentive to local gendered practices, would fill a substantial gap.

A fourth priority is cost-effectiveness analysis. The economic case for SSP has rested heavily on the catastrophic-expenditure argument. An explicit cost-per-disability-adjusted-life-year calculation, drawing on the Hasan et al. (2022) service-mix breakdown and linked clinical outcome data, would give the scheme the kind of independent economic evaluation that Thailand's Health Intervention and Technology Assessment Program routinely produces for its own scheme (HITAP, 2024).

6.7 Concluding Reflection

The Sehat Sahulat Programme is now a decade old. In that decade it has moved Khyber Pakhtunkhwa from one of the most uninsured populations in South Asia to one of the most insured in Pakistan. That is an unusual achievement in a fiscally constrained province, and it should be recognised as such. The scheme has also revealed the limits of what hospital-based insurance alone can do. Families who are insured against catastrophic inpatient cost can still be impoverished by chronic-disease outpatient care, by informal payments, and by the transport and lodging costs that accompany a tertiary referral to Peshawar.

The question is not whether SSP should continue. The answer to that question is clear. The question is what comes next, and on that question the evidence assembled in this thesis points in a particular direction. Primary-care integration matters most. Governance reform of the SLIC contract matters almost as much. Data transparency matters almost as much again. The policy framework that would make Pakistan's universal coverage ambition credible is already visible in the Thai example, and it is already being pieced together on the Pakistani side. What remains is the political and fiscal will to carry it through.

The student hopes that this thesis contributes, in a small way, to that carrying through. The research questions it addresses are public questions. The data it assembles are public data. The recommendations it makes are addressed to public institutions that have been unusually willing to open their records to independent evaluation. If even one of the recommendations is taken up, the four months of fieldwork, the six chapters of writing, and the support of Dr Kashif Saeed, of the Department of Economics at the University of Peshawar, and of the families who took the time to fill in the questionnaire will have been justified.

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Appendices

The appendices that follow carry the instruments and documentation supporting the primary survey described in Chapter 3. Appendices A and B contain the English and Urdu versions of the structured questionnaire; Appendix C the informed consent form; Appendix D the account of how fieldwork access was obtained; and Appendix E a working dictionary of the variables used in the administrative time-series analysis.

Appendix A: Questionnaire (English)

The complete English instrument runs to 54 items arranged in five blocks: (Block 1) demographics and household composition; (Block 2) household economic profile including monthly income, principal earner occupation, and asset ownership; (Block 3) health-service utilisation under the Sehat Sahulat Programme over the last twelve months; (Block 4) out-of-pocket expenditure for the most recent hospital episode, broken down by medicines, diagnostics, transport, and informal payments; and (Block 5) physical well-being, operationalised through the five-item WHO Well-Being Index (WHO-5) supplemented by the SF-12 Physical Component Summary. The full instrument is supplied as a companion file, Questionnaire_English.docx, bound with the submitted thesis.

Appendix B: Questionnaire (Urdu)

The Urdu version was produced through forward translation by two bilingual researchers from the Department of Economics, followed by independent back-translation into English, and cognitive pre-testing with ten pilot respondents at Lady Reading Hospital. Items carrying culturally sensitive phrasing, for example questions on intra-household financial decisions, were reworded to match local idiom while preserving the scoring anchors of the WHO-5 and SF-12 instruments. Pashto oral administration protocols were developed for respondents with limited Urdu literacy. The full Urdu instrument is supplied as a companion file, Questionnaire_Urdu.docx, bound with the submitted thesis.

Appendix C: Informed Consent Form

The consent form is bilingual (English and Urdu) on a single A4 sheet. It states the purpose of the study, the voluntary nature of participation, the respondent's right to withdraw at any stage without consequence for their care, the data confidentiality protocol (responses stored

on a password-protected device, identifiers removed before analysis, findings reported only in aggregate), and a contact line for the supervisor and the Department of Economics ethics representative. Two signatures are recorded at the foot of the sheet: the respondent's and the enumerator's. Minors under eighteen years of age are excluded from the sample; respondents with limited literacy sign using a right-thumb impression after oral narration of the consent clauses by the enumerator.

Appendix D: Hospital Access and Permission

Formal letters of permission were not issued for this study. Access to patients at Lady Reading Hospital and at Northwest General Hospital was secured informally through personal references inside each institution. At Lady Reading Hospital, a senior consultant known to the researcher's family facilitated entry to the Outpatient Department and introduced the researcher to the Sehat Card Plus focal person, who in turn agreed that the questionnaire could be administered to cardholders during defined hours, provided that clinical workflow was not disrupted. At Northwest General Hospital, access was arranged through a family contact with standing at the administrative office; verbal permission was extended on the understanding that the research was strictly non-interventional, anonymous, and academic, and that findings would be shared with the hospital on publication. The supervisor, Dr Kashif Saeed, was kept informed at each step, and every enumerator carried an introductory note on University of Peshawar Department of Economics letterhead explaining the study's purpose. That introductory note, together with the respondent's own informed consent captured on the form described in Appendix C, constituted the working authorisation for fieldwork. No patient record was viewed and no clinical data beyond what a respondent voluntarily disclosed was recorded.

Appendix E: SSP Variable Dictionary

The administrative time-series dataset assembled for Chapter 4 draws from four official sources. The variable dictionary records each variable used, its source, its unit, and any coverage caveats. Key variables include: FAMILIES_ENROLLED (count of SSP-registered families, annual, source: SLIC annual reports and sehatsahulat.com.pk, unit: millions, coverage: KP only from 2016 onwards); CLAIMS_PAID_PKR (total disbursed claim value, annual, source: KP Health Department press releases compiled by Yusufzai 2025, 2026, unit: PKR billions); EMPANELLED_HOSPITALS (count of public and private facilities on the SCP panel, annual, source: KP Health Department and statehealth.com.pk, unit: count);

OOP_SHARE_CHE (share of current health expenditure from out-of-pocket payments, annual, source: World Bank GHED / Pakistan National Health Accounts, unit: per cent); and CHE_HEADCOUNT (share of households spending more than ten per cent of consumption on health, source: PSLM-HIES rounds analysed in UHC Monitoring Report 2024 reported by Junaidi 2025, unit: per cent). Variables carrying a coverage gap before 2018 are flagged in the dataset with an NA marker rather than an imputed value.