ORIGINAL ARTICLE

Effect of a state-funded social health insurance programme, on equitable access to health care, financial risk protection and economic well-being in Khyber Pakhtunkhwa Province, Pakistan

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Abstract

Objective: To determine the effect of the SCP on access to health care, financial risk protection and perceived economic well-being among beneficiaries.

Methods: Using a comparative, cross-sectional design, household survey was conducted across 10 districts of the KP province during Nov22-Feb23. A total of 3619 households were recruited in which at least one member had received SCP inpatient services (users=1874) and neighbourhood households where a hospitalized member did not use SCP inpatient services (nonuser=1745). Generalised regression models were used for analyses after adjusting for the propensity scores.

Results: Socio-economic and demographic differences were not found between SCP user and non-user groups. Compared to SCP nonusers, SCP users were more likely to seek inpatient care from private hospitals and covered more distance to get to empanelled health facilities, stay longer in hospitals, especially for patients with chronic diseases and injuries. There was a significant reduction in medical care component of mean out-of-pocket expenditure for inpatient services among SCP users (PKR 1,006 ±9,248) as compared with SCP nonusers (PKR 30,042 ±69,014). The nonmedical component (transport etc.) was not substantively different in both groups. The level of catastrophic health expenditure was significantly lower among SCP users 253 (14%) compared to SCP nonusers 621 (35%), leading to higher perceived economic wellbeing among SCP users.

Conclusion: KP Government's SCP has been effective in improving financial risk protection among its beneficiaries, resulting in an increased sense of economic well-being, as compared to SCP nonusers. SCP needs to devise strategy to increase access to inpatient services, particularly among poorer families to maximize its impact.

Keywords: Sehat Card Plus (SCP), Financial Risk Protection, Inpatient Care, Out-of-Pocket Expenditure, Catastrophic Health Expenditure. (JPMA 74: S-13 [Suppl. 11]; 2024) **DOI: https://doi.org/10.47391/JPMA.SCPP-03**

Introduction

Countries of the world have committed to achieving universal health coverage (UHC) under the Sustainable Development Goals (SDG),[1] aiming to improve health care access and financial risk protection.[2] However, low- and middle-income countries (L&MICs) face a particular challenge in achieving UHC due to lack of resources for health care, large population sizes and challenging geographic terrains.[1] Consequently, access to health care and the burden of financial cost tend to be worse for the poor, often resulting in forgone care.[3,4]

Health insurance, as a financing modality for UHC, is widely used to promote equal access to health care utilization and financial protection worldwide,[2,5-7] including L&MICs[8-12] Emerging evidence from L&MICs regarding National Health Insurance (NHI) schemes has shown promising results, including the reduction of catastrophic health expenditures (CHE),[13] out-of-pocket (OOP) expenditures,[14,15] household borrowings, and the protection of household assets among beneficiaries. These have also been observed to have a significant effect on improving equity in service utilization.[16-17] At the same time, low enrolment, suboptimal quality of healthcare, low accessibility of local healthcare service providers, and variation in equitable access are reported as a persistent challenge.[18]

Pakistan had a GDP per capita of US$ 1,538 in 2021. Its current health spending in 2019 was low at 3.4% of GDP or US$ 39.5 per capita. Government spending on health at 4.9% of its annual expenditure is inadequate to accommodate health needs of the population, which results in high level of out-of-pocket payment, at 53.8% of current health expenditure.[19] Consequently, a significant (13.2%) proportion of the population is vulnerable to financial catastrophe and impoverishment due to healthcare payments.[19] These direct healthcare expenditures are responsible for aggravating economic shock in poor families and influence health outcomes.[19-21] Over the last three decades, Pakistan has lagged behind its

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south Asian neighbours in demonstrating improvements in the health status of its population.[22] Therefore, a critical need was identified for Pakistan to enhance financial risk protection for its citizens and commit to UHC.

In 2015, the country embarked on its journey to UHC by launching the Sehat Card Plus programme, a flagship publicly funded health insurance initiative of the KP government. This initiative was based on the health financing thematic pillar of National Health Vision 2016-25 that proposes pro-poor social protection initiatives. The Social Health Protection Initiative (SHPI) aimed at financing and managing health care based on risk pooling, mainly contributed by the government. The programme provides inpatient care at empanelled public and private hospitals through a Sehat Card, making it cashless at the point of care for the beneficiary families. While there is empirical evidence from many LMICs[23-25] that such an approach protects people against financial and health burden and is a relatively fair method of financing health care,[26] no robust evaluation has been undertaken of the SCP Programme. This paper reports on the first ever outcome-level evaluation of the SCP Programme aiming to determine the extent to which the Programme has improved access to healthcare and protecting the vulnerable segments of population from financial catastrophe. It also provides actionable recommendations and propose a roadmap for further improvement and expansion of the SCP, to enhance its financial and health impact as well as distil lessons that other province of country and LMICs could benefit from.

To evaluate the effect of SCP on access to health care, financial risk protection including out-of-pocket expenditure and catastrophic health expenditures, and economic well-being among its beneficiaries.

Material and Methods

A population-based, comparative, cross-sectional survey design was used to evaluate the effect of SCP Programme on access to health care and out-of-pocket expenditures. The survey was conducted in ten districts of Khyber Pakhtunkhwa, namely: Peshawar, Kohat, Swabi, Upper Dir, Dera Ismail Khan, Malakand, Chitral, Bannu, Abbottabad, and Swat. These districts were selected based on the Human Development Index, ensuring geographical representation from the northern, central, and southern regions of the province.

The target population was households in which at least one member had received inpatient services under the SCP Programme (referred to as "SCP users" hereafter) within the last 12 months. For the purpose of comparison, within the same clusters, we recruited neighbourhood households in which at least one member had received inpatient services within the last 12 months, but not under the SCP programme (referred to as "SCP nonusers" hereafter).

A sample size of 3,840 households was estimated using PASS software version 11.0 (Power Analysis and Sample Size).[27] The primary outcome of interest was average annualized expenditure (PKR) for inpatients, assuming a 20% difference (4000 PKR) between SCP user and nonuser households, as shown in another study from India.[28] The baseline value of approximately 20,000 PKR was assumed from PSLM 2015-16,[29] in the absence of SCP programme, with a 95% confidence interval, 80% power, design effect of 1.5, and 10% non-response. The survey was completed on a sample of 3,619 households (1,874 SCP users and 1,745 SCP nonusers).

A multi-cluster stratified sampling technique was employed. We used the sampling frame of 2017 National Census which is developed by the Federal Bureau of Statistics. A total of 20 urban-rural strata for each of the ten districts were created, followed by random selection of clusters using probability proportional to the number of households in each cluster. In each cluster, the team completed the survey among SCP users and SCP nonuser households. The strategy for the selection of households within clusters was such that the team identified a major landmark in each cluster and by spinning a bottle/pen on the ground to identify the direction of starting point followed by a consecutive recruitment of households, meeting either SCP user or SCP nonuser eligibility criteria, till the desired sample for each group was achieved.

A unified, comprehensive, structured questionnaire was developed based primarily on literature review, adaptation of existing validated questionnaires, and consultation with experts. The adaptation of standardized modules was done in view of the design of SCP programme and its on-ground implementation. The final questionnaire comprised of following sections: a) respondent characteristics, b) demographics of household members, c) out-of-pocket health expenditures for inpatient (last 12 months) and outpatient (last 3 months) for all household members, d) perception about inpatient healthcare services for most recent admission, e) wealth status using demographic health survey approach, f) household monthly income and expenditures.

The data collection took place from November 2022 to February 2023. Ten field teams, each comprising four enumerators, were engaged for electronic data collection on tablets, each led by a district-level supervisor. The data collectors were local residents of each district and were familiar with geography and languages. The data collector received a comprehensive four-day training that included

interactive sessions on survey questionnaire, mock interviews and field practice. The field teams were closely monitored by the research investigators.

Face-to-face interviews were conducted in home-based settings. The data entry platform was designed on REDCap® software with validation checks. On average, the interview lasted for 60 minutes. Data were routinely examined during the survey for missing values, out of range responses, and logical inconsistencies. Field teams were routinely consulted for rectification of errors. The cleaned data were then transferred to Stata for analysis.

Stata version 16.1 (StataCorp LP, Texas, United States) was used for all analyses, and p-value of less than 0.05 was considered statistically significant. All analyses were adjusted to account for complex survey design, stratification, and primary sampling units (clusters).

The survey examined the differences in key outcomes between SCP users and SCP nonusers. First, we applied bivariate analyses using independent t-test (continuous variables) and Pearson chi-square test (categorical variables) to compare the characteristics of households and head of household between the two groups. Second, the effect of SCP programme on key outcome indicators was examined using propensity score matching (PSM), a standard statistical technique, that takes into account systematic differences in (observed) characteristics of the sample in each intervention group that are the source of selection bias. Propensity score was calculated for each household which estimates the likelihood that this household received inpatient services from SCP programme conditional on its observable characteristics. The choice of variables included in our propensity score model for SCP evaluation was based on a combination of existing literature and data-driven approaches. These variables are outlined in Table 1 below. The effect of SCP programme on key outcome indicators was examined by comparing SCP user and SCP nonuser households after adjusting for propensity scores.

Multivariate generalized linear and logistic regression models were used to estimate the differences in key outcome indicators per inpatient encounter between SCP user and SCP nonuser households after adjusting for propensity scores. For the ease of interpretation, adjusted means and percentage were reported instead of regression coefficients such as mean differences or odds ratios. It is pertinent to note that some estimates are derived at the level of admission (denominator) while others are reported at the household level.

Ethics: The study was approved by the Ethics Review Committee of the Aga Khan University (Ref. ID: 2022-7632-22601, dated: August 30, 2022) and National Bioethics Committee (Ref. No. 4-87/NBC-817/22/401, dated: September 27, 2022)

Results

The financial risk protection analysis primarily presents results of comparative analysis between SCP users and SCP nonusers. It begins with the comparison of household characteristics and subsequently presents differences in key outcome indicators in the form of adjusted means and

Table-1: Socio-demographic characteristics of household and household head by SCP user and SCP nonuser groups.

Characteristics of Household head	SCP user n (%)	SCP nonuser n (%)	*p*-value
Household Head			
Sex - head			
Male	1709 (91.2)	1613 (92.4)	0.275
Female	164 (8.9)	133 (7,6)	
Mean Age – head*** (years)	48.8±13.6	44.6±13.9	<0.001
Education – head			
No formal/less than primary education	855 (45.6)	765 (43.8)	0.038
Primary	173 (9.2)	148 (8.4)	
Secondary	216 (11.5)	167 (9.6)	
Higher (Matric and above)	629 (33.6)	666 (38.1)	
Occupation – head**			
Professional, technical, or managerial	165 (8.8)	(177) 10.11	0.002
Clerical	57 (3.0)	61 (3.5)	
Sales and services	399 (21.3)	426 (24.4)	
Skilled manual	366 (19.5)	350 (20.0)	
Unskilled manual	249 (13.3)	253 (14.5)	
Agriculture	84 (4.4)	63 (3.6)	
Domestic service	12 (0.6)	24 (1.3)	
Retired	54 (2.8)	37 (2.1)	
Unemployed	486 (25.9)	355 (20.3)	
Student	1 (0.05)	-	
Household Characteristics			
Religion			
Islam	1870 (99.8)	1740 (99.7)	0.644
Hinduism/Christianity/Kalash	4 (0.21)	5 (0.28)	
Ethnicity			
Pakhtun	1390 (74.2)	1267 (72.6)	0.081
Hindko	215 (11.5)	208 (11.9)	
Siraiki	150 (8.0)	177 (10.1)	
Chitrali	68 (3.6)	67 (3.8)	
Others (Muhajir/Kohistani etc.)	51 (2.7)	26 (1.5)	
Family system*			
Joint	515 (27.5)	381 (21.8)	0.001
Nuclear	1359 (72.5)	1364 (78.2)	
Total mean members in household**	5.81±2.6	4.84±2.2	0.001
Total mean earning member in household*	1.28±0.76	1.17±0.64	0.001
Wealth quintile			
Poorest	380 (20.3)	344 (19.7)	0.120
Poor	345 (18.4)	379 (21.7)	
Middle	384 (20.4)	340 (19.5)	
Rich	364 (19.4)	360 (20.6)	
Richest	401 (21.4)	322 (18.4)	

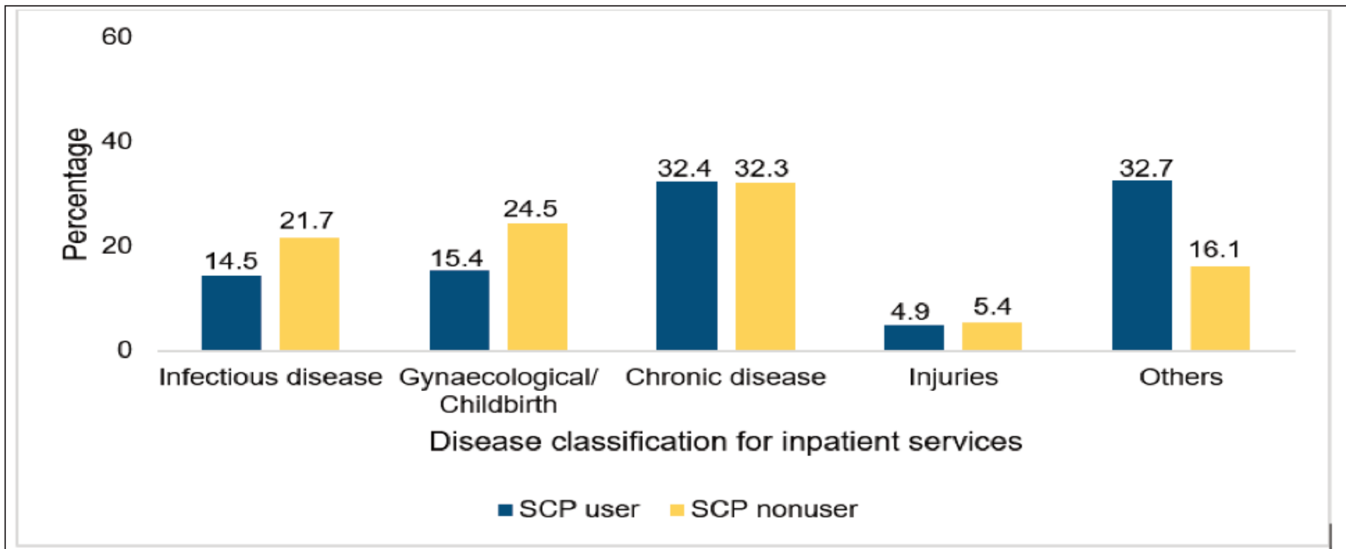

Figure-1: Percent distribution of disease for inpatient care among SCP User and SCP Nonusers.

percentages. We also estimated relative change (known as the average treatment effect on the treated), which is the magnitude of the change in outcomes associated with the SCP Programme.

Demographic Characteristics

There is a high level of similarity between the demographic and household characteristics of SCP users and SCP nonusers (Table 1). The households in both the groups are predominantly headed by males,1702 (92%) in SCP users and 1613 (92.4%) in SCP nonusers, with a mean age of 46±13.9 years [48.8±13.6 in SCP users and 44.6 ±13.9 years in SCP nonusers]. Nearly half of household heads,855 (45.6%) in SCP users and 765 (43.8%) in SCP nonusers had received no formal education or did not complete primary-level education. Sales and services, [399 (21.3%) in SCP users and 426 (24.4%) in SCP nonusers], skilled manual [366 (19.5%) in SCP users and 350 (20.0%) in SCP nonusers], and unskilled manual [249 (13.3%) in SCP users and 253 (14.5%) in SCP nonusers] were the most commonly cited occupations of household heads.

Across both the groups (SCP users and SCP nonusers), almost all surveyed households were Muslims [1870 (99.8%) in SCP users and 1740 (99.7%) in SCP nonusers] with Pashtun [1390 (74.2%) in SCP users and 1267 (72.6%) in SCP nonusers] being the predominant ethnicity. The average household size was slightly higher than 6 members with on average 1.2 earning members–relatively higher in SCP users 1.28±0.76 as compared with SCP nonusers 1.17±0.64. Whilst majority of households lived in a nuclear family system in both the groups, the percentage was slightly higher in SCP nonusers 1364 (78%) as compared with SCP users 1359 (72%). Overall, these differences were not substantive. A significant difference was observed in the wealth status of the household between the two groups (Table 1).

Significant differences were found between SCP users and SCP nonusers in terms of the type of diseases for which inpatient care was sought. The proportion of infectious diseases and obstetric/gynaecological was higher among SCP nonusers whereas the proportion of chronic disease and injuries were similar in both the groups (Figure 1).

Access and utilization of healthcare services

The comparative analysis of access and utilization of inpatient healthcare services between SCP users and SCP nonusers reveals that people who utilized inpatient care through SCP Programme had to cover significantly more distance to get to the health facility as compared to SCP

Table-2: Access and utilization of healthcare services for inpatient care.

Healthcare utilization	SCP users (n=1874)		SCP nonusers (n=1745)		Relative change (%)	*p*-value
	Mean ±SD	(95% CI)	Mean±SD	(95% CI)		
Distance to hospital for inpatient services (kilometres)	43.9±96.5	(39.8–48.1)	34.7±84.5	(30.4–39.0)	21.0	0.003
Length of stay in the hospital for inpatient care	3.39±3.9	(3.2–3.5)	2.99±3.7	(2.8–3.1)	11.5	0.002
	n (%)		n (%)			
Share of public sector hospital for inpatient services	928 (47.5)		1023 (53.7)		-13.1	0.001

Note: These estimates are adjusted for propensity score; CI stands for confidence interval.

nonusers (Table 2). The mean travel distance among SCP users was approximately 44±96.5 km (95% CI: 39.8–48.1) compared to 34.7±84.5 km (95% CI: 30.4–39.0) for SCP nonusers. Furthermore, the average length of stay (ALOS) in the hospital for inpatient care was fractionally higher for SCP-users (3.4±3.9 days), 95% CI 3.2–3.6) as compared to SCP nonusers (Mean=3.0±3.7 days, 95% CI 2.8–3.2). The SCP users were less likely to seek inpatient care through public-sector hospitals 928 (47%) as opposed to SCP nonusers 1023 (53%).

Effect of SCP on financial risk protection

Out-of-pocket health expenditure was estimated using the average medical and non-medical expenditures incurred while availing inpatient care. The mean out-of-pocket expenditure for SCP users was PKR 6,551±12534 (medical = PKR 1,006 ± 9248; non-medical=PKR 5,546±7891) which is significantly lower than the overall mean expenditure of PKR 34,639±72188 (medical=PKR 30,042±69014; non-medical=PKR 4,563±5680) for SCP nonusers (Figure 2A). The main drivers of expenditure for receiving medical care amongst SCP users were the costs of medicines and laboratory tests. For the latter group, the main drivers of costs under medical care were physician's consultation fee and surgery. The cost of non-medical care was not substantially different between the two groups: SCP users spending almost PKR 1,000 more than the SCP nonusers (*p*<0.001) perhaps due to longer distance travelled.

With regards to catastrophic health expenditure, the proportion of households whose health expenditure was greater than 10% of the total household income was compared. Overall, around one out of every four households incurred catastrophic health expenditure. Among SCP nonusers, 620 (35%) reported incurring catastrophic health expenditure compared to 253 (14%) among SCP users (Figure 2B).

Table 3 compares the distribution of SCP users and SCP nonusers whose households incurred catastrophic health expenditure across wealth quintile and place of residence. Overall, households from the poorest wealth quintile and those living in rural areas were more likely to experience

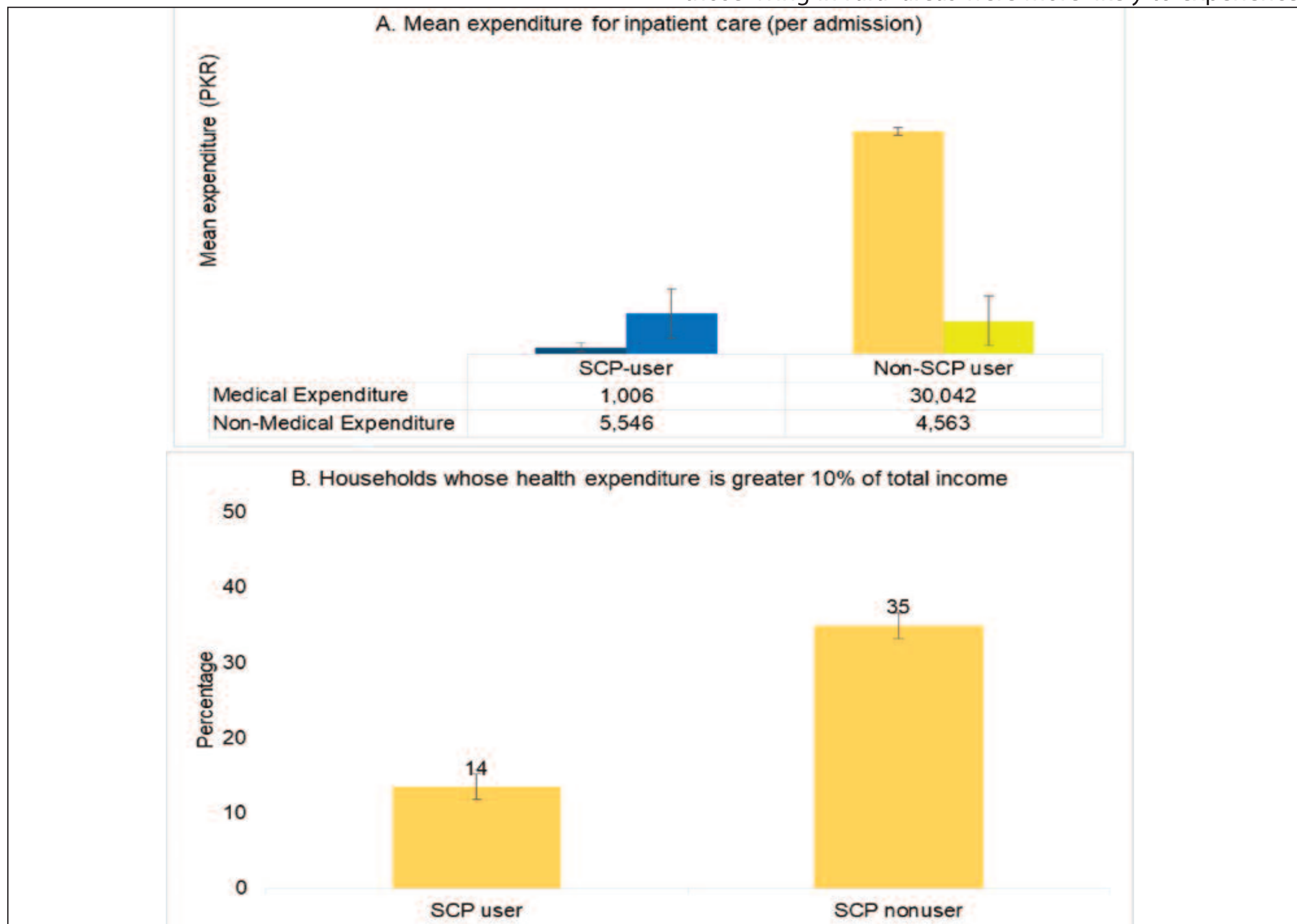

Figure-2: A & B: Effect of SCP programme on healthcare expenditure. *Note: These estimates are adjusted for propensity score.*

Table-3: Effect of SCP Programme on catastrophic health expenditure across socio-economic strata.

Socio-economic factors	Household whose health expenditure >10% of total income[2] SCP users n (%)	SCP nonusers n (%)	*p*-value
Wealth quintile			
Poorest	76 (19.9)	158 (46.9)	<0.001
Poor	53 (16.1)	119 (33.1)	
Middle	37 (9.6)	107 (32.2)	
Rich	54 (15.1)	135 (38.9)	
Richest	33 (8.0)	90 (28.1)	
Place of residence			
Urban	74 (13.9)	157 (31.3)	<0.001
Rural	179 (13.4)	452 (37.3)	

Note: These estimates are adjusted for propensity score.

catastrophic health expenditure in both groups. With regards to wealth, proportion of households incurring catastrophic health expenditure is highest in the poorest wealth quintiles in both groups [SCP users=76 (20%) vs SCP nonusers=158 (47%)] and lowest in the richest quintiles for both groups [(SCP users=33 (8%) vs SCP nonusers=90 (28%)]. Moreover, with respect to the place of residence, SCP nonusers living in rural areas incurred catastrophic health expenditure most frequently 452 (37%), followed by SCP nonusers living in urban areas 157 (31%), urban SCP users 74 (14%), and rural SCP users 179 (13%).

Economic well-being of households

Table 4 illustrates the effect of SCP Programme on the economic well-being of the families who experienced the burden of hospitalization expenditures in the past 12 months.

The SCP Programme demonstrates a remarkable effect in helping families manage out-of-pocket expenditures for inpatient healthcare. In order to manage out-of-pocket expenditure for inpatient care, SCP user households reported using savings, taking out loans, or selling assets for 1104 (55%) of the admissions as compared to 1389 (75%) of the admissions for SCP nonusers, which is a relative difference of 27% less for SCP users. Similarly, 1266 (69%) households, among SCP nonusers reported that meeting inpatient costs was extremely difficult as compared with 872 (44%) for SCP users, which is approximately 37% less than the former. Finally, with regards to the perceived impact of last one year hospitalization on economic status, while 1 in every 5 households among SCP users reported the impact was 'severe or very severe', the proportion was significantly higher among SCP nonusers at 38%.

Discussion

In Pakistan, a significant burden of out-of-pocket payments for health, leading to the vast majority of population being vulnerable to financial catastrophe and impoverishment,

Table-4: Effect of Sehat Card Plus Programme on economic well-being.

Indicators of economic well-being	SCP user (n=2007) n (%)	SCP nonuser (n=1849) n (%)	Relative difference (%)	*p*-value
[1]*Household used savings or took loan or sold assets to manage OOP for inpatient care*				
	1104 (55.1)	1389 (75.4)	-26.9	<0.001
[1]*Perceived level of difficulty for family to meet inpatient costs*				
Extremely difficult	872 (43.5)	1266 (68.5)	-36.5	<0.001
Somewhat difficult	702 (35.0)	470 (25.4)		
Not at all difficult	433 (21.6)	113 (6.1)		
Perceived impact of last one year of illness/hospitalizations on economic status				
Severe or very severe impact	392 (22.3)	464 (36.1)	-38.2	<0.001
Moderate or no impact	1431 (78.5)	829 (64.1)		

[1]The denominator for this indicator is the number of admissions.

particularly effecting the poorer families.[30] The SCP programme represents a significant step taken by the Government of Khyber Pakhtunkhwa towards achieving UHC), aiming to enhance financial risk protection for its citizens. Our evaluation revealed a positive impact of SCP, whereby SCP users experience significantly reduced inpatient medical expenses, leading to lower catastrophic health expenditure across wealth quintiles and residences, improving economic financial well-being.

Financial risk protection

Our study revealed that the mean expenditure for inpatient care among SCP users was significantly lower than the overall mean expenditure of SCP nonusers after adjusting for the propensity score. This difference is attributable to the SCP programme. One possible reason for incurred medical expenditures among SCP users could be related to laboratory tests or medicines that may not be readily available at the hospitals. Although not substantial, the cost of non-medical care borne by SCP users was slightly higher than that of SCP nonusers. This is probably due to the longer distance travelled and longer stays in the hospital by SCP users compared to their counterparts.

Furthermore, in our study, SCP nonusers reported incurring significantly higher catastrophic health expenditures (35%) compared to 14% among SCP users. This finding is aligned with studies from Ghana, Rwanda, Tanzania and Vietnam where health insurance schemes have been able to reduce the incidence of catastrophic health expenditures.[31-34] However, some evidence from Zambia[35] and India[36] showed no protective effect of health insurance on catastrophic health expenditures. While we found a substantial reduction in catastrophic health expenditure (CHE) across all strata of wealth status and places of residence (urban/rural), the level of CHE was nearly half (46.9%) and 37% among the poorest and rural populations, respectively. This finding is contrary to findings from social health insurance schemes in Ghana[37] and Ethiopia[38] that were found to be highly pro-poor. Considering the rich and

poor are equally likely to utilize SCP Programme services, these findings highlight the urgent need for developing UHC-driven pro-poor strategies to ensure that the SCP Programme serves lower socioeconomic quintiles as much as, and possibly more than, the richer quintiles of the population. Such approaches aim to minimize out-of-pocket payments and catastrophic health expenditures, aligning with the principle of 'progressive universalism.' The same holds true for the population residing in rural settlements, where healthcare service utilization is generally low due to lack of accessibility, and hence leads to poor health outcomes. Going forward, it is critical to monitor the proportion of out-of-pocket payment as percentage of CHE at the household level for inpatient and outpatient care. The latter is the major source out-of-pocket payment (72%) in the country based on national health accounts analysis.[39]

Perceived economic well-being

Our study also demonstrated that SCP has improved perceived economic well-being of the families who utilised inpatient services under the SCP programme. This effect is probably mediated by the reduced health expenditures on hospitalisation. These findings are consistent with other countries like Vietnam[40] and Ghana where this national health insurance was also found to be strongly associated with economic well-being.[41]

Access to health care

Compared to SCP nonusers, SCP users were more likely to seek inpatient care from private hospitals and covered more distance to get to empanelled health facilities, especially for patients with chronic diseases and injuries. The preference for private sector hospitals is likely rooted in the lack of trust and confidence among SCP users in accessing public hospitals, which may be due to the unavailability and inadequate quality of services.[40-43] Additionally, the SCP programme follows specific empanelment criteria, requiring hospitals to meet minimum standards of care. These hospitals are typically located in cities and urban areas. Consequently, in order to receive services from SCP empanelled hospitals, patients may have to travel greater distances. There is a need to enhance trust and confidence among SCP users to access public hospitals, especially at the secondary level, at the same level as private hospitals. In order to fill this gap, government may consider upgradation of secondary hospitals in districts that currently do not have empanelled facilities. Government may also consider re-profiling public hospitals, especially district level secondary hospitals, by adhering to strict empanelment criteria, investing in infrastructure, introducing competition through demand side financing, and better marketing in the health insurance scenario. Furthermore, consistent with the other studies,[44-46] we observed a higher length of stay among SCP users compared with SCP nonusers. In contrast, in other studies found no link between insurance and length of hospital stay.[47] By leveraging digital information management for health insurance admissions, the SCP programme should routinely monitor inconsistent trends in various hospitals, including a range of health services, length of stay, and other key indicators, to minimize moral hazards associated with the SCP programme

Strengths and limitations

The study has some limitations. First, the estimation of CHE was done on households in which at least one member had received inpatient care during the last 12 months. Hence, the estimates are not directly comparable with existing surveys in which CHE is estimated on the general population (i.e., inclusive of households with no inpatient admission). Second, the study used a comparative cross-sectional survey design (most appropriate in current scenario) which is relatively less robust as compared with randomised or quasi-experimental design. Third, the wealth status between the two groups was done on a relative measure in the form of wealth quintiles – hence, we are uncertain whether the groups will be similar on absolute poverty. In terms of strengths: a) the study used standard tools/questionnaires that are routinely used by the Government of Pakistan for economic surveys nationally; b) we used propensity score matching technique in the analysis to account for possible differences between SCP users and SCP nonusers; c) the survey included a provincially representative sample adopting methodology internationally used.

Conclusions

The SCP Programme in KP province has achieved significant milestones in just seven years, extending financial risk protection to its beneficiaries by reducing out-of-pocket payments and catastrophic health expenditures. Given its performance, we strongly recommend the consolidation and institutionalization of the programme in KP province, positioning it as a frontrunner in achieving universal health coverage (UHC) in Pakistan. Moving forward, the programme needs to develop strategies and monitor implementation to increase utilization among the poorer segments of the population, maximizing the impact on financial risk protection for low-income households and improving economic well-being. To enhance accessibility and utilization of services at public hospitals, there is a need to build trust and confidence among the population, especially at the secondary level hospitals. In this regard, the government may consider upgrading secondary hospitals in districts that currently lack empanelled

facilities. Lastly, by leveraging digital information management for health insurance admissions, the SCP programme should routinely monitor inconsistent trends in various hospitals, including a range of health services, length of stay, and other key indicators, to minimize moral hazards associated with the SCP programme.

Disclaimer: Limited findings from this study have previously been discussed in a report titled "Third Party Evaluation of Sehat Card Plus Khyber Pakhtunkhwa" which was conducted by the Department of Community Health Science at the Aga Khan University, Karachi, Pakistan.

Conflict of interest: None.

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