DOI https://doi.org/10.5281/zenodo.16743984

SEHAT SAHULAT PROGRAM AND ITS EFFECTS ON HEALTHCARE UTILIZATION PATTERNS IN KHYBER PAKHTUNKHWA, PAKISTAN

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Abstract

In 2015, the Khyber Pakhtunkhwa government introduced the Sehat Sahulat Program (SSP), a publicly sponsored health insurance scheme aiming at reducing out-of-pocket medical expenses of the public. Despite the program's implementation in both the public and private sectors, some previous studies indicate a higher utilization of private hospitals' services compared to public hospitals under SSP. This paper examines the key factors that influence patients' preferences for private healthcare under SSP in Khyber Pakhtunkhwa, focusing on the quality of services provided by both the private and public sectors. Data was obtained using quantitative questionnaires on the key variables such as patient load, quality of care, resource availability, personalized care, and supervision, influencing healthcare utilization decisions. This study's theoretical approach comprises the Theory of Planned Behavior, Rational Choice Theory, and Social Cognitive Theory. Patients' decisions were found to be primarily influenced by perceptions of better quality of care, higher resource availability, and more personalized treatment in private hospitals. The study provides evidence-based insights into healthcare utilization trends, emphasizing the need for strategic reforms in public sector healthcare services to provide fair access and make the best use of public funds. Finally, this study contributes to a better knowledge of healthcare dynamics in Khyber Pakhtunkhwa, as well as to the larger discussion on healthcare policy and management in Pakistan.

Keywords: Healthcare, Sehat Sahulat Program (SSP), Healthcare Utilization Patterns, Quality of Care, Public and Private Hospitals, Public Healthcare, Private Healthcare

1. INTRODUCTION

Health plays a key role in determining human capital. Better health improves the efficiency and productivity of a labor force, ultimately contributes to economic growth, and leads to human welfare (Akram & Khan, 2017, Sairmaly, 2023). Across diverse social and cultural settings, each country tailors its healthcare system to address the healthcare needs of its population in a unique social and cultural milieu. Main goal of healthcare system is to deliver equitable, effective, and accessible healthcare services to enhance patient satisfaction (Naseer et al., 2012). In Pakistan's context, the provisioning of healthcare as outlined in the 1973 constitution of the Islamic Republic of Pakistan under article 38, assigns the state the pivotal responsibility of public health. However, After the 18th Amendment in constitution the devolution of healthcare services, healthcare provision to the public has been decentralized, and now it is the prime mandate of provincial governments (Khattak et al., 2023).

In response to alarming health statistics and to the demands of Sustainable Development Goal (SDGs) of the United Nations (UN), in 2015 the provincial government of Khyber Pakhtunkhwa launched a publicly

funded health insurance program to ease the out-of-pocket expenditure of its citizens (Ahmad, Rahman & Rahman, 2024, Akram & Khan, 2017). However, in spite of the fact that the program being implemented in both public and private sectors of the province, some of the recent reports including Third Party Evaluation Report (2023) indicates the patient utilization of health care services in private sector hospitals under the Sehat Sahulat Program (SSP).

According to Third Party Evaluation report of the Sehat Card Plus (2023) which is the brand name of SSP, 63% of admissions were in private hospitals and 37% were in public hospitals. Despite the existence of the public sector hospitals in the province, the program led an exponential growth in private investment in the healthcare sector and enabled an environment for competition in the private sector (Saeed, 2023). The research endeavors to probe the underlying factors driving patient's fondness towards private sector hospitals, offering a critical examination of the dynamics between private and public healthcare sectors within the province.

Healthcare utilization is a complex process that is influenced by a variety of factors such as socioeconomic status, service availability, and individual desire. Previous research has found that the private sector frequently attracts patients because of perceptions of greater quality care, shorter waiting times, and better facilities, even when cost is a major factor (Burns, & Roszkowska, 2016). Public healthcare institutions, on the other hand, are often linked with affordability and accessibility, but they are often criticized for congestion, long waiting times, and inconsistent service quality.

Research on the SSP has indicated that, while the program has enhanced healthcare access for marginalized communities, private healthcare providers continue to be used disproportionately. This tendency has been linked to private hospitals' perceived superiority in terms of personalized care, resource availability, and patient satisfaction (Ahmed & Nisar, 2010)

1.1 Related Theories

1.1.1 Theory of planned behaviour

Ajzen (1991) developed the Theory of Planned Behavior (TPB), expanding on his earlier work on the Theory of Reasoned Action (TRA). TPB is a psychological framework that seeks to explain human behavior, particularly in the context of decision-making. According to the theory, behavior is influenced by three key factors: subjective norms (individuals' perceptions of social pressure), personal attitudes (positive or negative evaluations of a behavior), and perceived behavioral control (the perceived ease or difficulty of performing the behavior) (Ajzen, 1991). These components collectively shape an individual's behavioral intentions. In the context of healthcare decisions—such as the choice between public and private facilities—TPB suggests that patients' intentions are significantly influenced by their attitudes, perceived social expectations, and their sense of control over accessing a particular type of care (Godin & Kok, 1996).

1.1.2 Theory of rational choice

The Rational Choice Theory, originally developed by economists, is also known as social choice theory. Its foundations can be traced back to the contributions of early economists such as Adam Smith (Smith, 2002). While initially rooted in traditional economic contexts, the theory was later expanded and applied to broader social phenomena, notably by Becker (1976). Rational Choice Theory posits that individuals make decisions by evaluating a limited set of options, assigning value to each, considering the potential outcomes, and ultimately selecting the option that maximizes their personal benefit or net gain (Burns & Roszkowska, 2016). This theory has been widely applied across various disciplines, including economics, criminology, international relations, organizational sociology, public policy, and public choice (Burns & Roszkowska, 2016). This theory has dimensions that were helpful in identifying the influential choices that could affect that decision whether to go for private or public sector hospital for treatment where the individual has the option to opt for one of the two.

1.1.3 Theory of social cognition

Psychologist Albert Bandura developed the widely recognized Social Cognitive Theory during the 1970s, highlighting the role of social modeling, observational learning, and reciprocal determinism in shaping human behavior (Bandura & Walters, 1977). The theory asserts that individuals learn not only through direct experience but also by observing the actions and consequences experienced by others—such as peers, family members, or influential figures (Conner, 2009). Bandura emphasized that social modeling extends beyond simple imitation; individuals actively construct new behaviors based on what they observe and experience. Additionally, the concept of reciprocal determinism, central to the theory, explains how behavior, personal factors, and environmental influences interact in a dynamic and interdependent manner (Conner,

2009). This theory has also application in the current research model.

2. MATERIALS AND METHODS

This study used a cross-sectional survey design to measure knowledge, use, and satisfaction with healthcare services offered through the Sehat Sahulat Programme (SSP) in selected districts of Khyber Pakhtunkhwa (KPK), Pakistan. Data was collected using both quantitative and qualitative methods, including structured and open-ended questionnaires.

The population of this study is the whole general population registered with National Database Registration Authority (NADRA) of the province but the research was carried out in five KPK districts: Buner, Swat, Dir Lower, Bajawar, and Peshawar (hence the population of study is these five districts). A stratified random sample strategy was used to achieve a balanced distribution of participants from both urban and rural areas. The study included 500 participants, who were stratified by district, age, gender, and occupation to represent a diverse cross-section of the community.

A standardized questionnaire divided into eight areas was used to collect data: demographic information, awareness of SSP, healthcare consumption under SSP, quality of service, patient load, resource availability, personalized treatment, and quality of supervision. The questionnaire included both Likert scale items and open-ended questions, allowing for a thorough evaluation of the participants' experiences, perceptions, and ideas. Trained interviewers supported respondents who needed clarification or help completing the survey.

Quantitative data were analyzed with descriptive and inferential statistics. The data were analyzed using Statistical Package for the Social Sciences. Descriptive statistics, such as frequencies, percentages, and averages, were used to summarize the respondents' demographic characteristics and healthcare utilization trends.

Chi-square tests were used to investigate the correlation between categorical variables, including hospital type (public or private), and perceived service quality. We utilized independent sample t-tests to compare patient satisfaction scores between private and public hospitals. All statistical tests had a significant level of $p < 0.05$.

In addition to descriptive statistics, multivariate logistic regression was utilized to determine the parameters most strongly related with the selection of private hospitals under the SSP. The model incorporated variables such perceived quality of treatment, patient load, resource availability, personalized care, and supervision. This allowed us to identify the strongest determinants of patient choice for private healthcare services. The dependent variable was healthcare facility choice (private = 1, public = 0), while the independent factors were quality of care, patient load, resource availability, personalized care, and quality of supervision, as well as demographic characteristics such as age, gender, and education.

This quantitative survey combined with qualitative insights gave a comprehensive knowledge of the determinants driving healthcare utilisation under SSP, with a focus on variations between public and private sector hospital services. The study sought to discover the underlying determinants of patient behaviour, with an emphasis on characteristics such as care quality, resource availability, personalised therapy, and supervision.

3. RESULTS

The survey included replies from people of various ages, ranging from under 30 to over 50. The plurality of respondents (30.3%) was under the age of 30, followed by 25.5% in the 31-40 age range, 25.4% in the 41-50 age group, and 19.4% older than 50.

In terms of gender distribution, males made up 55.3% of the total, followed by females at 40.6% and others at 4.2%.

Regarding education, the majority of respondents (29.8%) had some college or technical education, while 25.4% earned a bachelor's degree. Around 20.5% were high school graduates, 10.3% had a master's degree, 10.2% had less than a high school education, and only 4.8% had a PhD or professional degree.

Employment status varied across the sample, with 59.6% of respondents employed, 20.2% identifying as students, 10.5% jobless, 5.2% retired, and 4.5% falling into other occupational groups.

In terms of healthcare service providers, 62.8% of respondents used private hospitals under the Sehat Sahulat Program (SSP), while 37.2% chose public hospitals.

Geographically, the study encompassed five districts in Khyber Pakhtunkhwa, with 20% of respondents coming from Buner, Swat, Dir Lower, Bajawar, and Peshawar.

Table 1: *Socio-Demographic Profile of Respondents*

Demographic Dimensions	Description	Frequency	Percentage
Age (years)	Up to 30	150	30.3
	31-40	125	25.5
	41-50	125	25.4
	Above 50	100	19.4
Gender	Male	163	54.3
	Female	137	45.6
Education	Not as much as a high school	35	11.7
	Graduate from high school	53	17.7
	Some Technical/ College	122	40.7
	A Bachelor Degree	58	19.3
	Master level education	16	5.3
	Professional or Doctorate Degree	16	5.3
Occupation	Employed	300	59.6
	Student	100	20.2
	Unemployed	50	10.5
	Retired	25	5.2
	Other	25	4.5
Service provider	Public Hospital	185	37.2
	Private Hospital	315	62.8
District	Buner	100	20.0
	Swat	100	20.0
	Dir Lower	100	20.0
	Bajawar	100	20.0
	Peshawar	100	20.0

The survey quantified/identified several major factors influencing the decision between private and public healthcare facilities in the Sehat Sahulat Program (SSP). The results are summarized as follows:

Quality of Care: Perceived quality of care was a key factor in healthcare facility selection. Those who assessed the quality of care in private hospitals higher were 2.56 times more likely to prefer private healthcare over public services (OR = 2.56, $p < 0.001$). This is consistent with the poll results, in which 55% of participants regarded private hospital care as superior to 35% for public hospitals. While 10% were undecisive or neutral in this area.

Resource Availability: The availability of advanced medical resources and equipment in private hospitals was a crucial factor in decision choice. Respondents who thought private hospitals were better equipped were 1.81 times more likely to use them (OR = 1.81, $p = 0.002$). Consistently, 45% of poll respondents said that private hospitals had greater resources than state hospitals.

Patient Load and Overcrowding: A larger patient load and concerns about overcrowding in public hospitals reduce the chance of using public healthcare. Respondents who reported overcrowding in public hospitals were 35% less likely to pick them (OR = 0.65, $p = 0.015$). This is consistent with survey findings, in which 50% of respondents identified overcrowding as a key issue in public healthcare institutions.

Personalized Care: Personalized care was also a significant consideration in healthcare decisions. Respondents who valued personalized treatment were 1.95 times more likely to prefer private hospitals (OR = 1.95, $p = 0.004$). Survey data backs this up, with 45% of respondents reporting higher satisfaction with the personalized care offered by private healthcare facilities than by public hospitals.

Quality of supervision: Quality of supervision in healthcare institutions had a substantial impact on patient preferences. Respondents who believed private hospitals provided better monitoring were 1.70 times more likely to prefer private treatment (OR = 1.70, $p = 0.009$). This finding is consistent with survey results, in which 55% of respondents regarded the quality of supervision in private hospitals as adequate, hence increasing trust in those institutions.

In private hospitals as adequate, bolstering their confidence in these facilities.

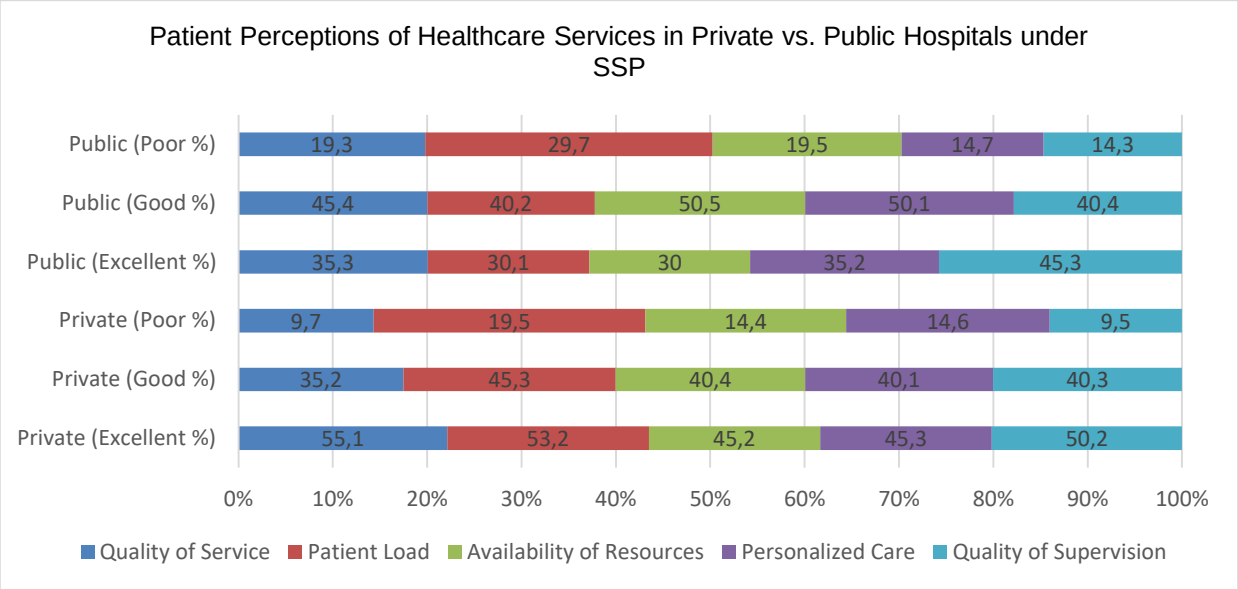

Fig. 1. Patient Perceptions of Healthcare Services in Private vs. Public Hospitals under SSP

4. DISCUSSION

The study gives crucial insights into patient preferences for private versus public healthcare facilities in Khyber Pakhtunkhwa as part of the Sehat Sahulat Program (SSP). Our findings show that perceptions of service quality, resource availability, and personalized treatment are critical in influencing healthcare decisions. These findings illustrate the complexities of healthcare utilization and identify critical areas for policy and service improvement.

Perceived Quality of Care was identified as a key element influencing patient preferences. Individuals who perceive superior care in private hospitals are much more likely to prefer private healthcare (OR = 2.56, $p < 0.001$). This preference is reflected in the study results, with 55% evaluating private hospital services as good vs 35% for public hospitals. This tendency is consistent with current literature, which frequently identifies quality of care as a primary driver of patient choice. The emphasis on improved service quality in private facilities argues that public hospitals should raise their service standards in order to attract and retain customers.

Resource availability also influences patients' healthcare decisions. The findings show that people who thought private hospitals were better equipped were 1.81 times more likely to use them (OR = 1.81, $p = 0.002$). With 45% of respondents believing that private hospitals have superior resources, it is clear that sophisticated medical technology and resources play a vital role in healthcare decisions. This conclusion emphasizes the need to invest in current medical technology and resources in public hospitals in order to increase their appeal and functionality.

Patient load and overcrowding have emerged as key negative factors influencing the use of public healthcare services. Respondents who expressed concern about overcrowding were 35% less likely to select public hospitals (OR = 0.65, $p = 0.015$). Overcrowding and long wait times were mentioned as important difficulties by 50% of respondents, emphasizing the importance of efficient management measures to improve patient flow and minimize congestion in public hospitals. Improving patient management and resource allocation could alleviate these issues and improve the patient experience in public settings.

Personalized treatment was another important aspect in healthcare decisions. Respondents who valued personalized treatment were 1.95 times more likely to prefer private hospitals (OR = 1.95, $p = 0.004$). The poll results, which revealed that 45% of respondents were more satisfied with the personalized treatment offered by private facilities, highlight the growing desire for individualized healthcare services. Public hospitals may need to devise strategies to provide more personalized care in order to fulfil patient expectations and improve satisfaction.

Quality of supervision also influenced patient choices, with those who perceived superior supervision in

private hospitals being 1.70 times more likely to choose private care (OR = 1.70, p = 0.009). Positive ratings of monitoring in private hospitals (55%) demonstrate the importance of good oversight in establishing patient trust. To increase patient confidence and service quality, public hospitals should improve their oversight and management processes.

Overall, the study found that perceptions of service quality, resource availability, and personalized treatment are important predictors of healthcare choices under the SSP. According to the findings, public hospitals must address overcrowding, increase resource availability, and improve service personalization in order to compete effectively with private hospitals. These enhancements may help balance utilization rates between public and private hospitals, guaranteeing fair access to quality healthcare throughout Khyber Pakhtunkhwa.

5. CONCLUSION

The study concludes that patient preferences between private and public healthcare facilities under the Sehat Sahulat Program (SSP) in Khyber Pakhtunkhwa are primarily influenced by perceived service quality, resource availability, quality of supervision, and personalized treatment. Private hospitals are favored due to perceptions of higher quality care, better equipment and instruments, less overcrowding, more personalized services, and stronger supervision. In contrast, public hospitals face challenges such as overcrowding, limited resources, and impersonal care, which deter patients. To improve utilization and equity within the SSP, public hospitals must enhance service quality, invest in medical resources, reduce overcrowding, and adopt patient-centered care strategies. A significant portion of the revenue coming from the SSP procedures needs to be reinvested in the provision of modern-day medical equipment and infrastructure of the public sector hospitals as the private sector hospitals do. Addressing these areas can help balance the public-private healthcare dynamic and ensure broader access to effective and equitable healthcare services.

6. ACKNOWLEDGEMENT

We are very thankful to the Higher Education Commission (HEC) of Pakistan, which provided financial help to pursue this academic journey through the National Research Program for Universities (NRPU-17555). Special thanks to all the team members on this project, like Prof. Dr. Wali Rahman and Mr. Saleem Shah, whose guidance and review helped improve this document.

We are also very thankful to the health department of Khyber Pakhtunkhwa, Pakistan and especially to the Social Health Protection Initiative (SHPI) officials, including the CEO, Dr. Muhammad Riaz Tanoli, Director, Dr. Ijaz Ahmad, and Deputy Director IT, Mr. Arshad Khan Afridi, for providing the secondary data and other related information to the patients and hospitals empaneled with the program.

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