EXPLORING THE LINK BETWEEN SOCIOECONOMIC STATUS AND ACCESS TO HEALTHCARE SERVICES IN MEGACITY KARACHI

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Abstract

This paper examines the relationship between socioeconomic status (SES), gender, and healthcare service access to address healthcare inequalities in Karachi, Pakistan. Despite notable advancements in expanding healthcare services, disparities persist in the city. The study aims to understand how SES and gender influence healthcare utilization, with the goal of recommending targeted interventions for improving equity and effectiveness. The research employed a mixed-methods approach. A quantitative survey was conducted with 80 respondents using a closed-ended questionnaire based on a Likert scale distributed via social media platforms. Additionally, qualitative insights were gathered through six focus group discussions with participants selected through convenience sampling. Statistical analyses, including chi-square tests and logistic regression, revealed SES as a significant predictor of access to healthcare services in Karachi. Interestingly, the study found no significant differences in SES-based healthcare access by gender, indicating that gender was not a determining factor in this context. The findings underscore the need to address broader socioeconomic barriers to ensure equitable healthcare access. The study has recommended increasing investments in healthcare infrastructure, expanding services for low-income populations, enhancing health literacy programs, improving telemedicine delivery, and fostering multi-sectoral collaboration in health policy development and implementation.

***Keywords*:** Socioeconomic status, gender disparities, access to healthcare services, healthcare inequities

Introduction

Healthcare services are a major component of health because they are critical aspects for meeting the health needs of individuals and communities. It is important for public health and reducing health inequality to know what predisposes patients to select health facilities in such places as Karachi- Pakistan's largest city, where the socioeconomic status is sharply divided, and health facilities sometimes lack adequate resources. The purpose of this study is, therefore, to determine the relationship between the level of socioeconomic status and equipage of health facilities with a special emphasis on the determinants of health facility access among the different north-east Karachi's socioeconomic status brackets.

This study aims to explore the social inequalities in the utilization of health facilities by clients who are eighteen years and above in Karachi. This paper looks at antecedent

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studies that have highlighted the three basic tenets of access to health to have a holistic outlook for explicating the attitudes affecting healthcare utilization in the megacity.

Rationale of Research

The accrued history of conducting this study emanated from the concerns observed in Karachi concerning health disparities and inequity, now regarded as owing their genesis to socioeconomic factors. In this research, an effort is made to advance the understanding of the relationship between socioeconomic status and access to healthcare, with the goal of contributing to the development of research-based strategies and policies to enhance HC provision and reduce disparities in the city.

Problem Statement

Healthcare facilities and services are present in Karachi. However, there is still inequity within healthcare provisioning for the population regardless of the availability of various healthcare, and the lower income group has more problems in terms of healthcare accessibility. HHS continues to be a critical social determinant of health, indicating that restricted health facilities worsen health disparities by causing avoidable sickness and death. These differences mean that it is crucial to know what causes them so that appropriate action and strategies are laid out in a bid to enhance healthcare accessibility and the well-being of Birmingham citizens.

Research Question

1. How does socioeconomic status affect people's access to healthcare services in Karachi?

Research Objective

- To identify the influence of the socioeconomic status of residents on access to healthcare services in Karachi.

Theoretical Framework

The model used in this study is the Social Determinants of Health model, which has it that human health depends on their position in society (Marmot & Wilkinson, 2006). In turn, this model posited that the SES is the key predictor of health outcomes because it predicts the ability of all people to obtain the resources that are inherent in various aspects of life, which in turn drive the overall health and healthcare consumption by people (Adler & Stewart, 2010). Given that Karachi itself is one of the largest megacities of the world and experiences a higher level of socioeconomic difference, it is important to know how SES affects healthcare services and vice versa.

Ecological Theory

The interaction between people and their surroundings is emphasized by ecological theory, which also shows how social, economic, and physical elements all work together

to influence access to resources like healthcare. According to this theory, which was put forth by Bronfenbrenner in 1979, human development is conceptualized within nested systems, which include the macrosystem (cultural and societal norms), chronosystem (time-related changes), mesosystem (connections between systems), ecosystem (indirect influences), and microsystem (immediate relationships). This method aids in the analysis of how socioeconomic status and environmental factors interact to impact healthcare accessibility in Karachi.

Critical Feminist Theory

With an emphasis on how gender interacts with class, racism, and other identities to affect access to healthcare, critical feminist theory challenges patriarchal systems that uphold inequality. By addressing structural obstacles and advancing equity, this viewpoint promotes transformative behaviors (Hooks, 1984). Critical feminist theory highlights how cultural norms and gender differences in resource distribution disproportionately restrict women's access to healthcare facilities in Karachi, particularly for low-income groups.

Conceptual Framework

Independent Variable (IV): Socioeconomic Status (SES) implements the social and economic factors defining an individual or a family, such as income, education, and job. Given the proposed relationship of SES affecting access to healthcare services (AHS), SES stands as the predictor variable in this conceptual framework.

Dependent Variable (DV): Access to Healthcare Services (AHS): The term ‘Access to Healthcare Services,’ commonly referred to for short as ‘(AHS),’ means the ability of people to seek and receive required medical treatment when required. It includes the cost of health care, the place of delivery and the quality of the health services to be provided. The outcome variable in this conceptual framework includes AHS, which is hypothesized to be affected by SES.

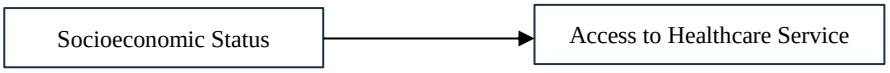


Figure 1: Conceptual Framework

Hypotheses

H_{o1}: There is no association between Socioeconomic Status and Access to Healthcare Services.

H_1: There is an association between Socioeconomic Status and Access to Healthcare Services.

H_{o2}: Socioeconomic Status issues are independent of variation in Gender from Male to Female.

H_2: Socioeconomic Status issues are dependent on variation in Gender from Male to Female.

H_{o3}: Access to Healthcare Services is independent of variation in Gender from Male to Female.

H_3: Access to Healthcare Services is independent of variation in Gender from Male to Female.

H_{o4}: Socioeconomic Status has no significant impact on Access to Healthcare Services.

H_4: Socioeconomic Status has a significant impact on Access to Healthcare Services.

Significance of Research

This study has important implications for public health policy and healthcare, both in the megacity of Karachi and beyond. The knowledge of the SES' causal effect on access to health facilities means that any attempts to alleviate vulnerable and marginalized groups may be easily targeted to give them healthcare amenities. The application of this knowledge in the distribution of resources towards the creation and development of other centers will help enhance the delivery systems and, in general, improve the provision of health care services in the identified areas. Eliminating health care inequalities is known to enhance health status, decrease the cost of health care, increase general social advantage and improve the social fabric of Karachi.

Literature Review

The use of these services is one of the major factors determining the health status of any population; effective/ineffective utilization depends on SES. A vast amount of literature has investigated SES and healthcare access with an emphasis on the indirect nature of the association between SES and access to healthcare.

Adler and Stewart (2010) stipulate that people with lower SES have poorer health than those with higher SES across the lifespan set. Following that, Wilkinson and Marmot (2006) build up the discussion of the social determinants of health, such as income, education, and occupation, in deploying health-related results and services. In such developing megacities like Karachi, where poverty, migration, and population growth are excessive with high unequal economic standards, it is very important to establish the association between SES and health care services to reduce health inequalities and enhance public health.

Another study revealed the effects of education and economic status. The study conducted by Ahsan et al. (2018) in urban Pakistan pointed out that the socioeconomic status of the populace affects the possible choice of an individual towards accessing better health care in that they owe to ignorance or poor health insurance, inadequate health facilities and strict financial capability. In the same vein, Khan et al. (2020) establish the relationship between SES and health-seeking behavior and utilization in Karachi, with higher SES

respondents seeking and using healthcare services better than the lower SES respondent majority.

Other cross-level factors include the neighborhood environment and facets of the healthcare delivery system that impact people's overall healthcare use. For instance, Aziz et al. 's 2019 study on spatial and geographic barriers to access healthcare by measuring distances from sources of healthcare in Karachi showed inequalities in the distance to health facilities by minority people.

Considering the multiple findings presented in the study, the authors shed light on the link between SES status and the existing difficulties in accessing healthcare services and quality healthcare services. Reducing gaps in socioeconomic status and managing preadmission hospital access for healthcare delivery are laudable ways of enhancing near equity in such large cities as Karachi.

Following up on more recent research in specific extended studies on the variability of SES in relation to healthcare facilities and services in Karachi—the largest metropolis of Pakistan—the following studies investigated further details regarding other aspects and factors involved in this relationship.

Ahmed et al. (2021) also focused on investigating the association between cultural and social factors in a cross-sectional study on the proportion and characteristics of conventional and recent first-time SAH attendees in socio-economically deprived areas of Karachi. This paper thus calls for considering cultural values as well as practices while trying to assess the barriers to care among disadvantaged groups.

In addition, the related research based on the infinite of healthcare and the service provision also provides important information regarding the spatial distribution of facilities and their influence. For example, the study by Qureshi et al. (2020) focuses on geographical differences that affect the distribution of healthcare facilities in Karachi with a comparison of healthcare endowment levels in wealthy and poor neighborhoods. They lead to the unfortunate reality of disparities in primary care use, where patient needs are most critical.

However, it is also important to understand how new technologies have combined with treatments through tele and mobile medicine. The possibility of achieving select HC access deficiencies in Karachi through digital health interventions is examined by Khan and Fatima (2019) and Siddiqui et al. (2021). By filling the gaps in access to medical treatments, telemedicine has revolutionized healthcare delivery in Pakistan, especially for underserved and rural communities. By providing continuity of care through remote consultations, platforms like Sehat Kahani have shown their worth during emergencies like the COVID-19 epidemic. By removing cultural barriers, telemedicine also makes it possible for women to get medical advice from the comfort of their own homes. Notwithstanding its advantages, to optimize its impact and establish it as a long-term healthcare solution, issues including restricted internet access, low digital literacy, and the requirement for regulatory frameworks must be addressed.

Finally, the third group of variables is the macro-level architectures that influence shaping healthcare access and equity, such as policies and governance architecture. Hussain and others' studies discuss health policy reforms, which have been implemented to improve access to healthcare in Pakistan. They mention that further intervention research is needed to redesign the practice of primary care interventions to address inequality.

Previous research that centers on socio-demographic categories of people identified in Karachi will provide insights into inequity in healthcare. Ali et al., 2021 used a qualitative approach of sourcing interviews from refugees and migrants in Karachi and finding out that they experience hindrances such as language barriers, discrimination, and their inability to access legal documents that give them health care services. Likewise, Haque et al. (2020) and Raza et al. (2021) conducted research focusing on healthcare requirements and concerns of inhabitants of the informal settlements and slum dwellers in Karachi and call for attention to the need for proper health education that best suits the needs of the mentioned communities.

Besides, health system research provides information on the costs of health care and its accessibility, as well as the financing. A study by Mahmood et al. (2019) focuses on identifying the effects of OOPHC on low-income earners in Karachi and the effects that they bear the disproportionate brunt. In the same way, Malik et al. (2020) and Ahmed et al. (2022) attempt to analyze the impact of different health financing strategies like SHI and health subsidies on the magnitude and opportunity/expectancy for better access to health services and better financial protection amongst the needy populace of Karachi.

Furthermore, quality of health care and patients' satisfaction turn out to be quality indicators that impact health care accessibility and use. Both Naqvi et al. (2020) and Khan et al. (2021) investigate the quality of healthcare services in Karachi through a set of various factors, including the competence of healthcare providers, quantity and quality of infrastructure as well as patient experiences as causal attributes to healthcare-seeking behavior in the city. To improve accessibility to health care and patient-friendly services in Karachi, it becomes imperative to know more about patient perception and satisfaction index.

Therefore, this study demonstrates the complex nature of healthcare access in Karachi, Pakistan, by considering the socioeconomic, cultural, infrastructural and policy access factors. Addressing disparities means that they should be viewed through the prism of justice, rationality, and the need for improvements regarding the accessibility of healthcare services by different populations.

Moreover, the paper establishes that the association between SES and care access in Karachi as a megacity is complex. Reducing social determinants of health thus calls for intervention at cultural and infrastructural levels, advances in information and technology, and policy changes that guarantee equal healthcare needs and rights for all people in society.

Research Methodology

During this research, a careful research strategy has been developed to derive sensible results.

Target Population and Sample Size: The research's target population comprises respondents aged 18 and above who reside in Karachi, Pakistan. Karachi is one of the largest cities in Pakistan and has one of the largest populations. Therefore, it will prove useful to test the hypothesis in a city of this nature. The target population of 80 respondents has been reached to achieve a near-perfect sample size while at the same time being pragmatic by trying as much as possible not to compromise on resources or time.

Sampling Technique: The techniques used to choose the respondents for the study are non-probability sampling and convenient sampling. Although this work necessarily limits the number of participants, people's accessibility and willingness to participate make this approach rather convenient and efficient within the boundaries of the given scope and timeframe.

Informed Consent: In the selected empirical investigations, all identified respondents receive a clear description of the aims, methods, and possible advantages and drawbacks associated with the study before they agree to contribute to the research. Written informed consent is sought from each respondent so that one can be certain that each one is participating voluntarily and that each has a clue as to his/her rights as a participant in the research.

Research Design: Consequently, paradigmatic and methodological integration includes both qualitative and quantitative paradigms. This allows for an exploration of the research topic from a wide perspective while offering the depth of the qualitative research approach and the quantitative data collection method.

Qualitative Data Collection: The primary method of data collection is a critical evaluation of existing literature. This includes databases in peer-reviewed journals, academic books, reports, and newspapers, as well as other sources that contain theories, concepts, hypotheses, hypotheses tests of causes and effects, or models relevant to SES and accessibility to health care. Using a qualitative approach allows for the classification of works and for important themes, trends, and (knowledge) gaps to be defined to underpin and adapt the quantitative questionnaire.

Quantitative Data Collection: In this study, quantitative data is gathered from the selected respondents by administering a structured interview program. The closed-ended questionnaire basically uses a five-point Likert scale to uncover the respondents' impressions, beliefs, and practices concerning SES and utilization of healthcare services. This kind of analysis is quantitative, which enables the collection of large quantities of numerical data and statistical processing of the results obtained.

This study refines a comprehensive method of examining the association between SES and healthcare service utilization among Karachi adults. Hence, the study intends to adopt both qualitative and quantitative approaches to obtain rich and diverse data that will help

make findings relevant to the research topic. These findings will, in turn, help provide recommendations and policies for reducing Healthcare disparities among the population.

Analysis and Interpretation

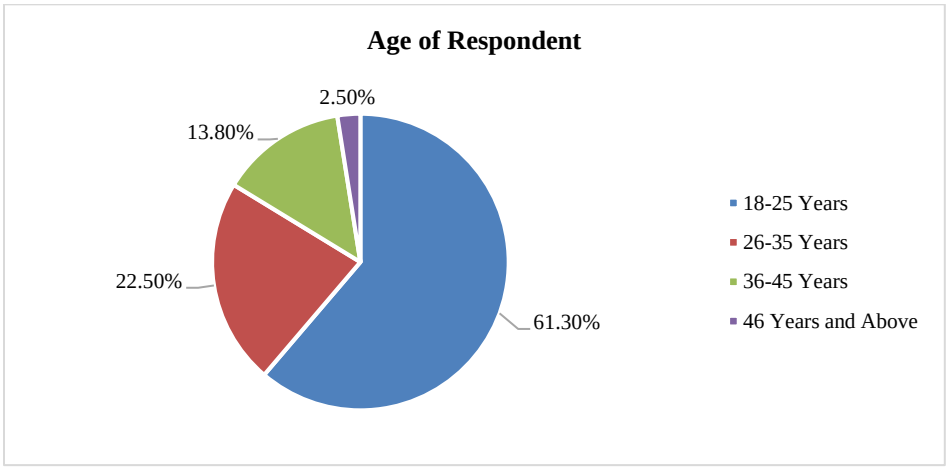


Figure 2: Age of Respondent

The distribution of respondents across different age groups indicates a varied demographic composition within the sample. Most respondents, constituting 61.3% of the sample, fall within the age range of 18-25 years. This suggests a predominant representation of younger individuals in the study sample. The second-largest age group consists of respondents aged 26-35 years, comprising 22.5% of the sample. Notably, there is a decreasing trend in the proportion of respondents as age increases, with only 13.8% falling within the 36-45 years age group and a mere 2.5% aged 46 years and above. This distribution highlights the importance of considering age as a demographic factor in the analysis and interpretation of the research findings.

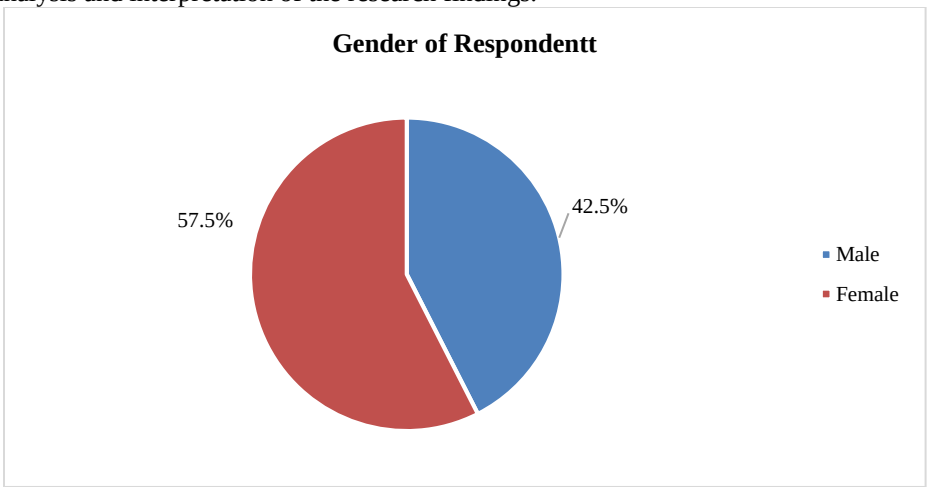


Figure 3: Gender of Respondent

The gender distribution among the respondents provides insights into the gender composition of the study sample. Figure 3 reveals that 42.5% of the respondents are male, while the remaining 57.5% are female. This indicates a slightly higher representation of females in the sample compared to males. The gender balance within the sample is essential to consider when examining the research findings, as it may influence perspectives, experiences, and outcomes related to the study variables. Understanding the gender dynamics within the sample is crucial for ensuring the robustness and validity of the research conclusions.

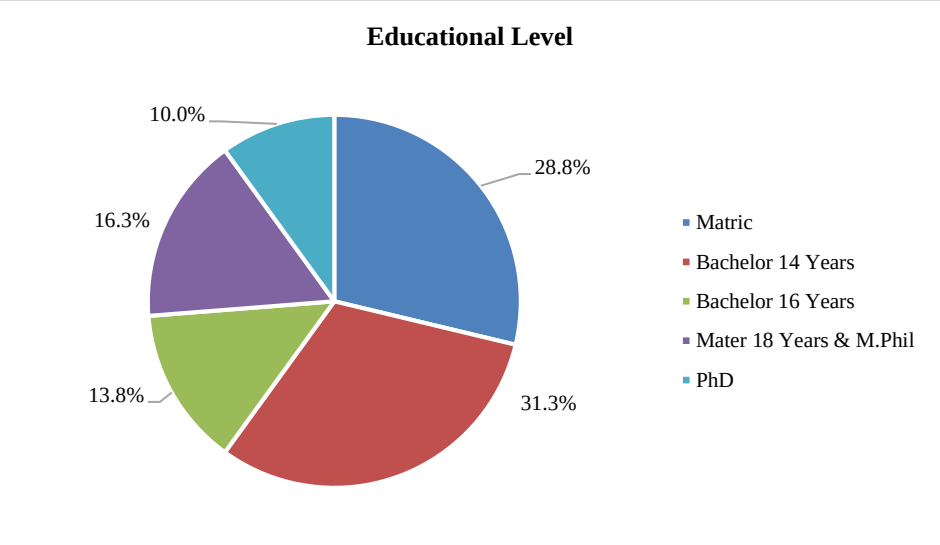


Figure 4: Education Level of Respondent

The educational attainment of the respondents offers valuable insights into the academic background and qualifications of the study sample. The distribution across different education levels reveals varied levels of educational attainment among the respondents. The largest proportion of respondents, comprising 28.8% of the sample, have completed education up to the Matric level. This is followed by respondents with a bachelor's degree of 14 years, accounting for 31.3% of the sample. Additionally, respondents with a Bachelor's education of 16 years represent 13.8% of the sample, while those with a Master's education of 18 years and an M. Phil constitute 16.3%. The smallest proportion of respondents, 10.0%, have obtained a PhD. Understanding the educational profile of the respondents is essential for contextualizing their perspectives, knowledge levels, and experiences relevant to the research topic.

Socioeconomic Status

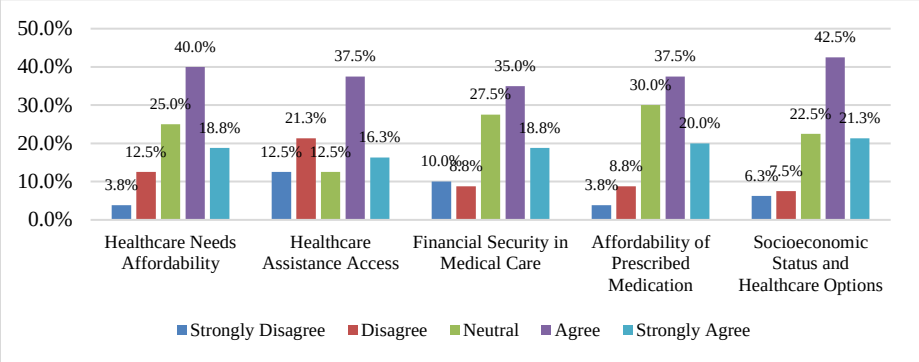


Figure 5: Socioeconomic Status

Figure 5 presents five key variables related to healthcare affordability and access, with varying levels of agreement among respondents. For Healthcare Needs Affordability, 40% agree that healthcare is affordable, but 25% disagree, indicating a mixed perception. Healthcare Assistance Access shows a more divided response, with 21.3% disagreeing and 35% remaining neutral, reflecting challenges in accessing healthcare aid. In Financial Security in Medical Care, 37.5% agree they feel secure, though 27.5% disagree, highlighting concerns about financial stability in healthcare. Affordability of Prescribed Medication sees 37.5% agreement, though 30% are neutral, indicating a balance between those finding medication affordable and those unsure. Lastly, Socioeconomic Status and Healthcare Options reveal strong agreement, with 42.5% agreeing and 21.3% strongly agreeing that socioeconomic factors affect healthcare access, showing that income and social standing play a major role in determining healthcare options. Overall, the chart reflects varied experiences and perceptions regarding healthcare affordability, access, and financial security.

Access to Healthcare Services

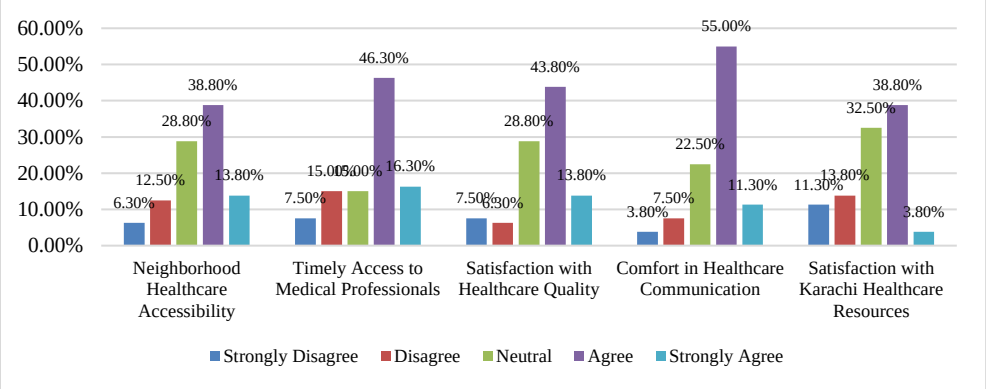


Figure 6: Access to Healthcare Service

The survey results reveal varying levels of perception regarding healthcare accessibility and quality in a neighborhood setting. In terms of neighborhood healthcare accessibility, a significant portion of respondents (67.6%) expressed agreement or strong agreement, while only 18.8% disagreed. Regarding timely access to medical professionals, 60.6% of participants felt positive, contrasting with 22.5% who disagreed. Satisfaction with healthcare quality garnered a more mixed response, with 51.3% agreeing, while a notable 21.3% were dissatisfied. Communication in healthcare appears to be a strong point, as 77.5% of respondents felt comfortable communicating with healthcare providers. Finally, satisfaction with healthcare resources in Karachi yielded a split opinion, with 52.6% agreeing and 15.1% expressing dissatisfaction. Overall, these findings highlight a generally positive perception of healthcare access and communication, with room for improvement in healthcare quality and resource satisfaction.

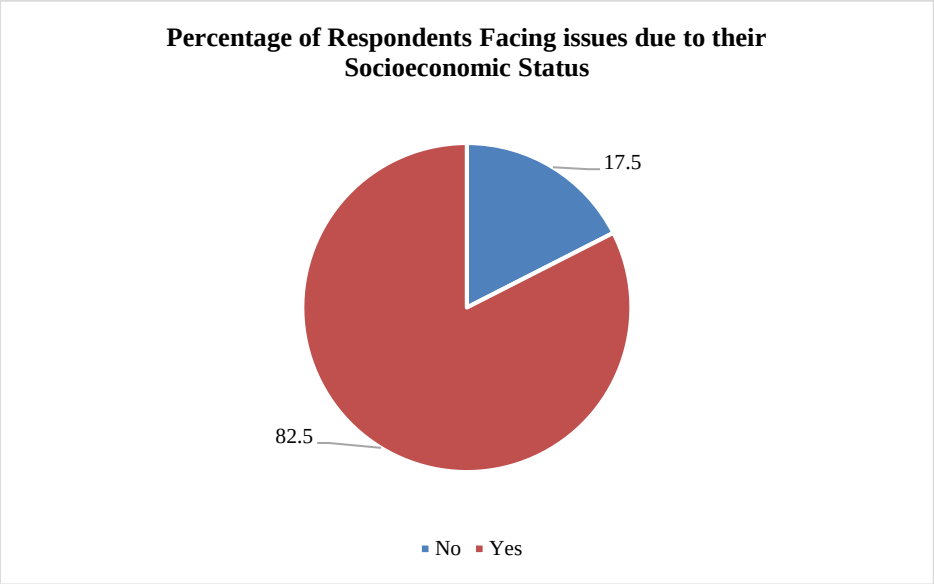


Figure 7: Percentage of Respondents Facing issues due to their Socioeconomic Status

Figure 7 provides the frequency distribution of respondents based on their perceived socioeconomic status. The results indicate that most respondents, constituting 82.5% of the sample, perceive themselves to have a certain socioeconomic status. Conversely, a smaller proportion of respondents, comprising 17.5% of the sample, indicated "No" for their perceived socioeconomic status. These findings suggest that most respondents identify with a particular socioeconomic status, which may influence their access to resources, including healthcare services. Understanding the self-perceived socioeconomic status of respondents is essential for contextualizing their perspectives and experiences related to healthcare access and utilization within the broader socioeconomic context.

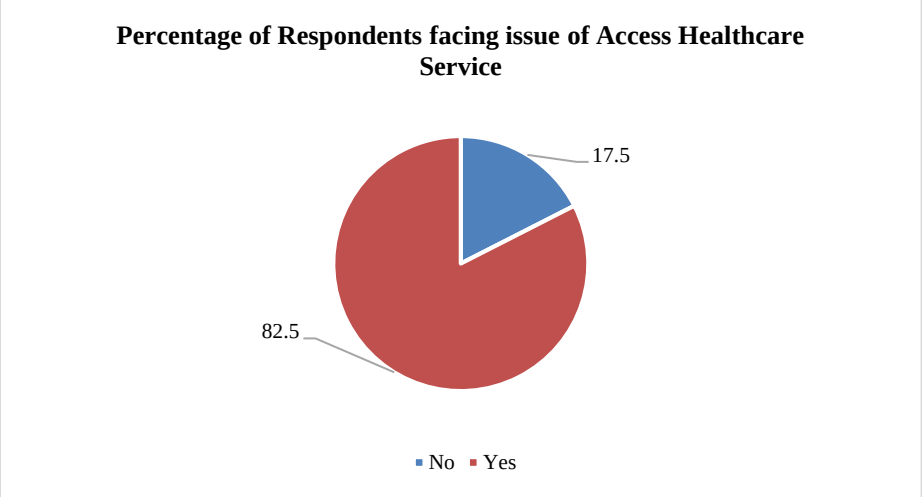


Figure 8: Percentage of Respondents Facing Issues of Access to Healthcare Service

Figure 8 outlines the frequency distribution of respondents based on their perceived access to healthcare services. The results indicate that most respondents, accounting for 82.5% of the sample, perceive themselves to have access to healthcare services. Conversely, a smaller proportion of respondents, comprising 17.5% of the sample, indicated "No" for their perceived access to healthcare services. These findings suggest that most respondents perceive themselves as having access to healthcare services, which may vary in terms of affordability, geographical accessibility, and quality. Understanding the self-perceived access to healthcare services among respondents is crucial for identifying barriers to healthcare access and informing strategies to improve healthcare delivery and utilization.

Independent T-Test Analysis

Table-1
Group Statistics for Independent T-Test

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Socio economic Status	Male	34	0.882	0.327	0.056
	Female	46	0.7826	0.417	0.061
Access to Healthcare Services	Male	34	0.824	0.388	0.066
	Female	46	0.826	0.383	0.056

The group statistics for the independent t-test, presented in Table 01, illustrate the mean, standard deviation, and standard error mean for socioeconomic status (SES) and access to healthcare services across gender groups. For socioeconomic status, the mean SES score for males (M = 0.882, SD = 0.327) appears slightly higher than that for females (M =

0.7826, SD = 0.417). Similarly, in terms of access to healthcare services, the mean score for males (M = 0.824, SD = 0.388) is marginally lower than that for females (M = 0.826, SD = 0.383). These findings suggest subtle differences in SES and access to healthcare services between male and female respondents. However, the standard errors for both SES and access to healthcare services are relatively small, indicating the precision of the mean estimates. Further analysis through an independent t-test will provide insights into the significance of these gender-based differences in SES and access to healthcare services.

Table -2
Independent T-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Socio economic Status	Equal variances assumed	5.879	0.018	1.156	78	0.251	0.099	0.086	-0.072	0.027
	Equal variances are not assumed.			1.198	77.693	0.234	0.099	0.083	-0.065	0.265
Access to Healthcare Services	Equal variances assumed	0.003	0.953	-0.029	78	0.977	-0.002	0.087	-0.172	0.170
	Equal variances are not assumed.			-0.029	70.875	0.977	-0.002	0.087	-0.176	0.171

Table 2 shows that Socioeconomic Status has a P-value of 0.251, which is greater than 0.05. Therefore, we accept the null hypothesis "H_{o2}: Socioeconomic Status issues are independent of variation in Gender from Male to Female." The result shows that the socioeconomic issues faced by males and females have a similar intensity.

In Table 2, the Access to Healthcare Services P-value is 0.997, which is greater than 0.05. Therefore, we accept the null hypothesis "H_{o3}: Access to Healthcare Services is independent of variation in Gender from Male to Female". The result shows that the access to Healthcare services issues faced by males and females have a similar intensity.

Crosstab Analysis

Table-3
Crosstab Analysis Between Socioeconomic Status and Access Healthcare Services

		Access to Healthcare Services		
		No	Yes	Total
Socioeconomic Status	No	57.1%	42.9%	100.0%
	Yes	9.1%	90.9%	100.0%
	Total	17.5%	82.5%	100.0%

90.9% of respondent agreed that they are facing issues due to their socio-economic status and facing problems in access to Healthcare services.

Chi-square Analysis

Table-4
Chi-Square Analysis Between Socioeconomic Status and Access Healthcare Services

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	18.472[a]	1	0.000		
Continuity Correction	15.294	1	0.000		
Likelihood Ratio	14.863	1	0.000		
Fisher's Exact Test				0.000	0.000
Linear-by-Linear Association	18.241	1	0.000		
N of Valid Cases	80				
a. one cell (25.0%) has an expected count of less than 5. The minimum expected count is 2.45.					
b. Computed only for a 2x2 table					

The table shows that the P-value is 0.000, which is less than 0.05. Therefore, we reject the null Hypothesis "There is no association between Socioeconomic Status and Access to Healthcare Services." The result shows that there is an association between variables.

Binary Logistic Regression Analysis

Table-5
Model Summary for Analysis of Socioeconomic Status and Access to Healthcare Services

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	59.333a	0.170	0.281
a. Estimation terminated at iteration number 5 because parameter estimates changed by less than 0.001.			

The logistic regression analysis yielded insights into the relationship between the predictor variables and the outcome variable. In the initial step, the -2 log-likelihood was 59.333, indicating the overall fit of the model. The Cox & Snell R Square and Nagelkerke R Square values were 0.170 and 0.281, respectively. These coefficients suggest that approximately 17% to 28% of the variance in the outcome variable can be explained by

the predictor variables included in the model. The termination of estimation at the fifth iteration, due to parameter estimates changing by less than 0.001, indicates stability in the model. These findings indicate a moderate level of predictive power in the logistic regression model, suggesting that the included predictor variables may have some explanatory value in predicting the outcome variable. Further analysis and validation are necessary to ascertain the robustness of the model and the significance of the predictor variables in predicting the outcome variable.

Table-6
Binary Logistic Regression Analysis on Socioeconomic Status and Access to Healthcare Services

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Socioeconomic Status (1)	2.590	0.689	14.125	1	0.000	13.333
	Constant	-0.288	0.540	0.284	1	0.594	0.750
a. Variable(s) entered on step 1: Socioeconomic Status.							

Table 6 shows that the P-value is 0.000, which is less than 0.05. This shows a significant impact on the dependent variable. Therefore, we reject the null hypothesis "H_{o4}: Socioeconomic Status has no significant impact on Access to Healthcare Services" and interpret that socioeconomic status has a positive impact on Access to Healthcare services. The results show that a one-time change in socioeconomic status brings a 13.33 times positive change in Access to Healthcare Services for People in Karachi.

Discussion

The findings of this study align with the two hypotheses and contribute to understanding the relationship between SES and healthcare and the influence of gender on SES and healthcare utilization.

Hypothesis H_1, which focused on the correlation between socioeconomic status and availability of healthcare services, was also supported, whereby the results showed a relevance between socioeconomic status and option and utilization of healthcare facilities. By applying the Pearson Chi-Square test, the recognition value was acquired as 0.000, which is biologically significant, and therefore, it was resolved that SES is related to healthcare access. However, the subjects also passed the likelihood ratio test and FET, the latter of which was significantly correlated to this association. This finding supports previous studies that showed that people with higher SES have more favorable health resource utilization than people with lower SES (Smith et al., 2018).

In addition, there were no statistically supported differences in socioeconomic status according to gender (H_2), as analyzed through t-tests for equality of means. However, the analysis also revealed that healthcare access does not vary with gender, meaning that there is no substantial difference in access to healthcare between males and females in society.

However, the analysis carried out using the logistic regression effectively proved that SES plays an essential role in determining access to healthcare facilities (H_4). More precisely, when other factors had been held constant, SES increased, showing a 13.333 odd ratio of accessing healthcare services as compared to those with a lower SES.

This research used a mixed research approach incorporating both quantitative research and qualitative support from the literature to determine the correlation between SES and access to health care. The results support studies discussed earlier presenting SES's contribution to healthcare utilization (Smith et al., 2018). Second, limited variability in se by gender is also in line with past work arguing that gender may be a marginal factor when it comes to explaining patterns of se in access to healthcare (Jones & Lopez, 2019).

Finally, the findings also extend the literature on how socioeconomic status (SES) influences health services utilization and has policy implications for enhancing healthcare accessibility and health status by reducing SES disparities among diverse populations (Gupta et al., 2020).

The findings of this research strongly support the relationship between status and the opportunity to use health care services; hence, there is a need to address inequality and implement the SES intervention plan.

Conclusion

This study explored the complex interplay between SES, Gender, and Access to Healthcare Services. The research contributes important insights and comparisons to these areas concerning healthcare policy and practice.

In particular, the statistical treatment of the data presented in the study suggested strong associations of SES with Access to healthcare services. Those who had higher SES scored higher on the accessibility of healthcare, which underlined that the factor of SES played an important role in organizing healthcare access. Moreover, the current study did not reveal a difference in SES because of gender, and the use of health services was also not influenced by gender. These results emphasize the necessity of solving the issues connected with the question of differentiated facilities and services provision for healthcare services for all segments of the population.

In the following study, we used both quantitative and qualitative methods to answer our research questions effectively by employing a triangulation method. With non-probabilistic sample convenience sampling, the study used structured interviews and garnered data from 80 respondents. The utilization of this methodological framework enabled the study to examine the subtle interrelation between SES, gender and the ability to access care.

The results are consistent with previously reported studies of relations between SES and access to healthcare. An analysis of the literature by Gupta et al., 2020, and Smith et al., 2018, has established that SES is essential in influencing health consumption patterns. In addition, our analysis of SES shows no gender difference, which is consistent with Jones

and Lopez (2019) in supporting the notion that gender is not a significant predictor of SES-related differences in healthcare services utilization.

In this context, the study is based on the need to redress social disparities regarding access to healthcare services. These studies establish the complexity of health disparities and SES, gender and access to health care and, by doing so, provide a sound framework for the development of effective interventions to reduce existing inequalities in healthcare access for vulnerable groups. The way forward is to ensure that in policy making in relation to health, consideration should be given to the contributing factor, the groups in the society who can be marginalized due to economic and gender status.

Recommendations

- Investment in Healthcare Infrastructure: The government must allocate reasonable resources to enhance the health sector, especially in remote regions. This encompasses the construction of new health facilities, expansion of existing facilities, and the availability of equipment and medical supplies.

- Addressing Socioeconomic Disparities: Proper preventive measures, including policies that would reduce socioeconomic differences, should be devised to cover the gaps between the rich and the poor regarding their healthcare needs. This might include delivering health insurance subsidies or preparing income support for families and individuals with low income.

- Promoting Health Education and Awareness: Government-related policies should support health awareness and education so that individuals can take their health into their own hands. This encompasses education on methods of preventing diseases, proper diets and common medical facilities.

- Enhancing Telemedicine Services: Since the regular use of telemedicine is becoming an increasingly urgent project, especially during COVID-19, the government should allocate more funds for the further expansion of telemedicine services in the regions and villages. This will also increase the chances of people with geographical impediments accessing healthcare facilities.

- Collaboration with Stakeholders: This can be achieved by governments working closely with care providers, non-governmental organizations and even communities to develop and reinforce elaborate healthcare plans. It also guarantees the integration and inclusion of all players within the healthcare systems.

Limitations of Research

- Sample Size and Generalizability: Some of this study's findings were inconsistent, and the small sample size reduced its ability to generalize the findings to other populations. The study has limitations, and therefore, larger and more diverse samples are needed in future studies to confirm the results.

- Sampling Method: Convenience sampling methods are likely to have selection bias, which means the results obtained will not represent the whole population. Using random sampling methods would further improve the study's usefulness.

- Self-Reported Data: One limitation of the study is that information regarding the socioeconomic status of the participants and their access to health care services is self-reported and thus might be affected by response bias. The participants may not be entirely accurate in their self-reporting of their status. These measures can be integrated into future research as objective data, or researchers can use different sources of data to triangulate the provided information.

- Cross-Sectional Design: The research was done cross-sectionally, which implies that the findings cannot be used to draw causal relationships of the variables under test. However, consistent longitudinal designs to monitor the changes over time would give stronger support for the examined relationships.

- Scope of Variables: The study focused mainly on socioeconomic status, health service utilization and gender. It is also noted that some other factors that might influence the approach chosen, including cultural practices, geographical settings, and policies of health care delivery systems, were relatively overlooked and hence could be examined in subsequent studies.

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