Out of Pocket Health Care Expenditure among Households in a Slum Area of Sindh, Pakistan

A Community based study

Dr. Farah Deeba Shaikh, Dr. Khalida Naz Memon, Dr. Zoheb Rafique Memon, Fatima Soomro, Dr. Mahmood Soomro & Dr. Aqsa Fatima

1. Dr. Farah Deeba Shaikh

Lecturer, Department of Community Medicine and Public Health Sciences. LUMHS, Jamshoro

2. Dr. Khalida Naz Memon

Professor, Department of Community Medicine and Public Health Sciences. LUMHS, Jamshoro

3. Dr. Zoheb Rafique Memon (Corresponding Author)

Lecturer, Department of Community Medicine and Public Health Sciences. LUMHS, Jamshoro

4. Fatima Soomro

Lecturer at People's Nursing school, LUMHS, Jamshoro

5. Dr. Mahmood Soomro

Assistant Professor Emergency Medicine LUH, Hyderabad/ Jamshoro

6. Dr. Aqsa Fatima

Post Graduate Resident Nephrology at LUH, Hyderabad

ABSTRACT

Background:
The access to the quality health care service is the basic human right. The high out of pocket payments identify weak health financing system of any country. The proposed study was an attempt to explore the level of out of pocket health care expenditure among households residing in slum area of Hyderabad, Sindh Pakistan.

Methodology:
Study Setting & Study Design: Community based descriptive cross sectional study conducted on three union councils of slum areas of Hyderabad.
Study Population & Sample Size: The 327 elder household members of the designated areas were selected through stratified sampling technique.
Data collection & Analysis: The structured questionnaire translated in local languages was used. Demographic variables along with household income as well as health care expenditure in

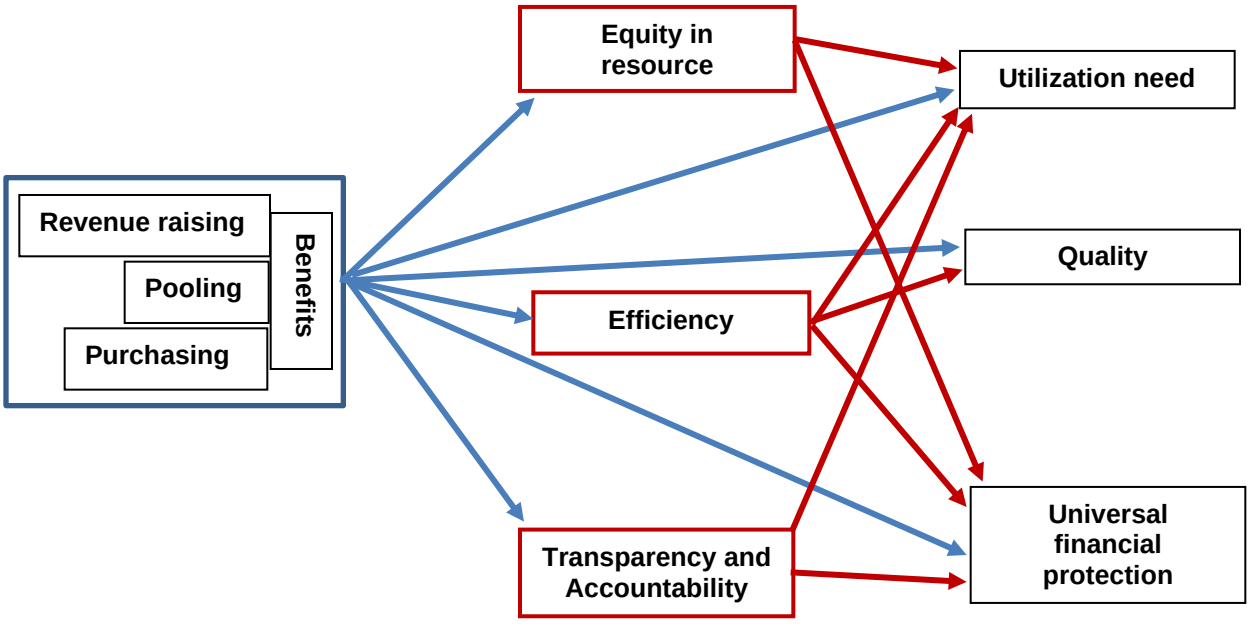
various heads were the study variables. The categorical variables were measured by computing proportions. The numerical variables like monthly income & monthly health expenditures were calculated by means ± standard deviation. The statistical associations between various variables of interest were measured by applying Chi-square test at 0.05 level of significance.
Results: The majority of subjects (239) belonged to poor class; the 26.91% belonged to middle class.Surprisingly, the number of earning members appeared substantially low. A huge percentage (i.e. 91%), almost the entire population did spend on OPDs on monthly basis. The monthly household income had statistically significant association to out-of-pocket expenditure ($p \leq 0.001$).
Conclusion: A substansive number of people show deep concerns about imbalance in monthly income & out-of-pocket health expenditure which neccessitates to be properly addressed by health policy-makers.

Key words: Out-of-pocket, health, expenditure, households, slum areas.

BACKGROUND

Achieving the highest attainable health through accessing the quality of health care is the basic human right. The exact form of services varies as country to country, but in all cases demands a robust financing mechanism[1]. The health sector represents one of the largest sectors of the world economy, however resources devoted to health sectors in developing countries are unequally distributed[2]. The health expenditure per capita is the amount which is used by a country for purpose of health; its variation depends upon the organizational structures of a country's health system[3]. Poor health decreases the efficiency of human capital. The out of pocket (OOP) payments are direct payments made by individuals to access health care services[4]. When out of pocket health care expenditures equals or exceeds the 40% of an effective income remaining after basic subsistence needs, health expenditure becomes catastrophic to the households[5]. This in turn threatens financial capacity of household to maintain daily living and impels household towards the poverty[6]. Among low-middle income countries, Pakistan struggles in achieving the health targets and indicators of sustainable development goals[7]. The public health services are underfunded with inadequate infrastructure and facilities whereas private sector is expensive and unregulated[8]. The higher fees for health services leads to catastrophic OOP in Pakistan[9] & contributes 66% of total health expenditure[10]. Such high out of pocket payments identify weak health financing system[11]. The report of World Bank stated Pakistan's total consumption on health to about 2.7% of total gross domestic product (GDP)[12]

Figure 1
The Cascade of Activities Leading to Achievement of Universal Health Coverage (UHC)



The above shown figure summaries the relationship between health financing arranging and UHC objectives as well as intermediate objectives that have reasonable associations to these goals.

There are hardly any studies conducted on out-of-pocket spending in underdeveloped areas of Sindh Pakistan especially in rural areas. Since the majority of people live below the poverty line, with weak educational backgrounds and limited access to better health principles, the slums gain a priority as a study population, to examine as to how taxing it is for them to meet their health care needs, amidst financial restraints. Out of Pocket health spending is leading many families especially belonging to rural households and urban slums towards poverty. Furthermore, this study will also help to provide doable framework for achieving universal health coverage in Pakistan. This will in turn help in development of a vibrant health sector in our country health sector.

OBJECTIVE

To determine the level of out of pocket health care expenditure among households residing in slum area of Hyderabad Sindh Pakistan.

METHODOLOGY

Study setting & design

Community based descriptive cross-sectional study carried out in slum areas of Hyderabad city, Sindh Jamshoro.

Study populatiomn, sample size & sampling technique

The study was conducted on elder household members of the designated areas, who were responsible for bearing health care expenditure of their families. The sample size was calculated by using sample size formula for estimating the single proportion by taking the proportion of households showing out of pocket health care expenditure = 22.8 percent[8]. A sample of 327 was approached through stratified sampling technique. The consenting household head/member taking care of financial matters/decisions of households were target population.

Data collection method & data analysis

Selected household were screened out on the basis of inclusion and exclusion criteria. The information was collected from household heads through interview based filling of questionnaire translated in local language. For recalling the expenditure, one month recall period was used for household consumption expenditure including food and non-food expenditure. For out of pocket health expenditure, annual recall period was used as there was high possibility that people might not have utilized any health care services in the preceding month. However, later all variables related to out of pocket health expenditures were divided with 12 and monthly average expenditure was used for further analysis. The final data was encoded in statistical software SPSS version 26.0 for windows. The categorical variables like socio-economic status, capacity to pay for health etc were measured by computing proportions. The numerical variables like monthly income & monthly health expenditures were calculated by means ± standard deviation. The statistical associations between various variables of interest were measured by applying Chi-square test at 0.05 taken as level of significance.

TABLE 1

Basic Information of Households Regarding Health Expenditure

Households Characteristics		Frequencies (%)
Socio-economic status	Poor class	239 (73.09%)
	Lower middle class	88 (26.91%)
Monthly household income	< Rs 15,000/=	78 (23.85%)
	Rs 15,000 – 24,000	125 (38.22%)
	Rs > 24,000	124 (37.92%)
Earning household members	≤ 2 members	278 (85.01%)
	> 2 members	49 (14.99%)
Satisfaction about balance of income & expenditures	Satisfied	58 (17.73%)
	Not satisfied	269 (82.27%)
Capacity to pay for health	Yes	24 (7.33%)
	No	303 (92.67%)

RESULTS

As is evident in the table, we see that there is no upper class in the distribution and the majority (73.09%) were placed in the poor class. Surprisingly, the number of earning members appeared substantially low i.e. almost 85% of the households had only one or two members of the house that did earn. The collective aggregate of all those houses having 3 to 5 people earning in the same house remained less than 15%. Here is some interesting information about the balance of earnings and expenditure among the respondents; only 17.73% of households were satisfied about the balance of income & health expenditure.

TABLE 2

Information Regarding Heads of Monthly Health Expenditures

Household Health Expenditure		Frequencies (%)
Out-patienthealt h expenditure	Yes	298 (91.13%)
	No	29 (8.84%)
Laboratory expenditure	Yes	285 (87.15%)
	No	42 (12.85%)
Medicine expenditures	Yes	318 (97.27%)
	No	09 (2.73%)
Hospitalization expenditures	Yes	258 (78.89%)
	No	69 (21.11%)
Expenditure due to chronic diseases	Yes	289 (88.37%)
	No	38 (11.63%)

The 97.27% respondents spent on medicines' purchase. The hospitalization due to chronic diseases are also reported as the major heads of health expenditure.

TABLE 3

Monthly Household Income Compared to Out of Pocket Expenditure

			Out of pocket expenditure <= 3000	3001 - 5000	5001+	Total
Monthly household income	<= 18000	Count	54	16	17	87
		Expected Count	35.2	26.2	25.6	87.0
		% within Monthly household income	62.1%	18.4%	19.5%	100.0%
		% within Out of pocket expenditure	50.9%	20.3%	22.1%	33.2%
		% of Total	20.6%	6.1%	6.5%	33.2%
	18001 - 25000	Count	33	39	18	90
		Expected Count	36.4	27.1	26.5	90.0
		% within Monthly household income	36.7%	43.3%	20.0%	100.0%
		% within Out of pocket expenditure	31.1%	49.4%	23.4%	34.4%
		% of Total	12.6%	14.9%	6.9%	34.4%
	25001+	Count	19	24	42	85
		Expected Count	34.4	25.6	25.0	85.0
		% within Monthly household income	22.4%	28.2%	49.4%	100.0%
		% within Out of pocket expenditure	17.9%	30.4%	54.5%	32.4%
		% of Total	7.3%	9.2%	16.0%	32.4%
Total		Count	106	79	77	262
		Expected Count	106.0	79.0	77.0	262.0
		% within Monthly household income	40.5%	30.2%	29.4%	100.0%
		% within Out of pocket expenditure	100.0%	100.0%	100.0%	100.0%
		% of Total	40.5%	30.2%	29.4%	100.0%

$p \leq 0.001$, chi-square value: 43.7; df:4

DISCUSSION

The current study is a good opportunity for observing the trends and differentials of out-of-pocket health care spending in a representative sample of communities living in slums areas. For assessing the data related to out of pocket health expenditures of household, it is very important to know the socio-demographic fabric of the study population. The economic status of the population in the chosen urban slum is evident as very low. It was revealed that either the respondents belonged to poor or to lower middle class which was expected to draw concrete result in the current survey.

It came as a surprise that the number of earning household members was recorded substantially lower than expected before the beginning of the survey. It was guessed that since the low economic societies do not engage children in the long term educational programs, they would have been involved in business and family earnings at a much lower age. The similar were the findings in another study conducted in India[13,14]. As the matter of fact, the imbalance between household income & health expenditure is to be addressed if sustainable development goals are to be attained[15]. Exploring the various heads of household health expenditures, is was found that a large proportion of respondents did spend on out-patient departments on monthly basis. Chronic diseases in turn pose a greater burden of financial costs for health care systems, including the share that goes to OOP spending[16]. The study participants stated that huge amount of expenditure is on purchasing of medicines; this is endorsed by other researchers, too [17,18]. Further, almost 97% respondents stated about their expenditures on purchase of medicines. While examining some prescriptions, available with many of the respondents, it was found that some particular local physicians, on private as well as government side, had a predilection for prescribing drugs produced by certain particular companies. The results revealed that a substantial number of people admitted in the hospitals, for any span of time whatsoever. We have already seen that almost 90% of the households had one or two of the members suffering from chronic diseases, hence the proportion of 88.4% subjects spending on chronic diseases is quite expected. Numerous studies conducted so far on the same subject reveal that there is unnecessary financial burden on common people incurred by hospitalization, laboratory work up & medicine charges [19,20]. Only 12% participants have shown the power to spend comfortably, whereas, 88% of the people have revealed their fiscal inability. What is important to note is that the amount of OOP spending rises steadily as the amount of income had risen; moreover, the OOP spending shows an uneven and strange distribution. The distribution patterns hint towards exploring the association between monthly income and monthly OOP expenses, to see if there is an interdependence or not. The data warrants attention to the fact that the raised financial and physical vulnerability of certain widespread and majority segments of our population and the need for policies, programs, and coordinated services that allow financially compromised pocket of our society to be able to cope with their essential medical needs without bearing serious financial consequences. Health problems often increase in number at same time that earning sources traditionally decrease or remain the same, resulting in an increased proportion of expenditures on savings, co-payment burdens, and other out-of-pocket expenses. This study suggests that escalating health care costs coupled with declining health status leaves those already weak & susceptible ones with the greatest financial and health vulnerability facing increasing demands on their

resources. When out of pocket health care expenditures equal or exceed the 40% of an effective income remaining after basic subsistence needs, health expenditure becomes catastrophic to a household[21]and this figure is very close to our finding in this study. This indicator is of critical importance in assessing the extent of financial protection within a health care system. If out-of-pocket expenditure is a huge percentage of total health expenditure, this will usually suggest limited financial protection. Hence, reducing the share of total health spending from OOP is a priority in many countries[22]. This study provides eye-opening scientific evidence, as expected, for the policy makers to perceive the catastrophe of the suffering poor majority and the devastations which could be brought upon them by their over-stretched fiscal incapability, made adverse by the rising OOP health expenditure.

CONCLUSION

This study work provides conversant evidence on magnitude of the OOP, its poverty and catastrophic impact. The findings revealed that there are many problems of financial protection among the people (households) in the urban slums of Sindh Pakistan. Many of the households, especially those belonging to vulnerable groups, encountered catastrophic health expenditure and/or were pushed into poverty due to health care payments. In order to achieve universal coverage through efficient health financing, the government will have to commit to both allocating better resources and their proper implementation for the improvement of better health care services' provision.

REFERENCES

1. WHO. Health systems: World Health Organization; 2018 [Available from: http://www.who.int/topics/health_systems/en.

2. WHO. Health System: Improving performance - World Health Report. World Health Organization; 2010

3. WHO. Health financing for universal coverage: World Health Organization; 2017 [Available from: http://www.who.int/health_financing/topics/revenue-raising/public-funding/en

4. WHO. Health financing for universal coverage: World Health Organization; 2017 [Available from: http://www.who.int/health_financing/topics/revenue-raising/public-funding/en/

5. Out-of-pocket payments, user fees and catastrophic expenditure: WorldHealthOrganization;2017 [Availablefrom:http://www.who.int/health_financing/topics/financial-protection/out-of-pocket-payments/en/.

6. Bank TW. World Bank Country and Lending Groups: The World Bank Group; 2017 [Available from:https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

7. Bordignon M, Turati G. Bailing out expectations and public health expenditure. Journal of Health Economics. 2019 Mar 1;28(2):305-21

8. Ahmed S. Catastrophic out -of -pocket healthcare payments for rural households in Bangladesh: Potential impact of introducing user fees. In: Khan MM, editor.: ProQuest Dissertations Publishing; 2006

9. Global Health Expenditure Database [Internet]. World Health Organization. 2014 [cited 2017]. Available from: http://apps.who.int/nha/database/ViewData/Indicators/en

10. Khalid M, Sattar A.Households Study on Out-of-Pocket Health Expenditures in Pakistan Forman Journal of Economic StudiesVol. 12, 2016 (January–December) pp. 75-88

11. Sadiq N, Qazi U, Rahman A, Hafeez A. Is health a priority among decision-makers of Pakistan? Evidence from Parliamentary questions screening. Public health. 2019 May 1;170:140-5.

12. Ullah I, Rehman A, Khan FU, Shah MH, Khan F. Nexus between trade, CO2 emissions, renewable energy, and health expenditure in Pakistan. The International Journal of Health Planning and Management. 2019

13. Bajpai V, Singh N, Sardana H, Kumari S, Vettiyil B, Saraya A. Economic and social impact of out-of-pocket expenditure on households of patients attending public hospitals. The National medical journal of India. 2017 Jan 1;30(1):15

14. Rahman S, Chaudhry IS, Farooq F. Gender inequality in education and household poverty in Pakistan: A Case of Multan District. Review of Economics and Development Studies. 2018 Jun 1;4(1):115-26

15. Doval H. Past and Future of Health Financing Worldwide and in Argentina. Argentine Journal of Cardiology. 2017 Aug 28;85(4):388-95.

16. Wagstaff, A. (2019). Health insurance for the poor: initial impacts of Vietnam's health care fund for the poor. Policy Research Working Paper # WPS 4134. WashingtonDC: World Bank.

17. Datta BK, Husain MJ, Asma S. Assessing the relationship between out-of-pocket spending on blood pressure and diabetes medication and household catastrophic health expenditure: evidence from Pakistan. International journal for equity in health. 2019 Dec 1;18(1):9

18. Mazhar F, Akram S, Malhi SM, Haider N. A prevalence study of potentially inappropriate medications use in hospitalized Pakistani elderly. Aging clinical and experimental research. 2018 Jan 1;30(1):53-60

19. Razzaq S, Chaudhry K, Tabassum R, Kanwal N. Policy research institutions and the health SDGs: building momentum in South Asia-Pakistan country study.

20. Ghaffar A, Pongpanich S, Mohiuddin N. Determinants of frequency of antenatal care visits among Pakistani pregnant women: An analysis of the Pakistan Demographic and Health Survey, 2012-13. Rawal Medical Journal. 2018 Jul 1;43(3):429-35

21. Goldman, D. P., & Zissimopoulis, J. M., (2011). The case of disability in the family: Impact on health care utilization and expenditures for nondisabled members. Milbank Quarterly, 77, 39-75

22. Ali Samnani AAB, Shaikh SR, Bhutto N (2018) Spotlight on Sindh Health Sector Budget. J Healthc Commun Vol.3 No.1:2