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ROLE OF SMALL TOWNS IN RURAL DEVELOPMENT REGARDING HEALTH AND EDUCATION IN PUNJAB

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ABSTRACT

The big cities all over the world as well as in Pakistan are expanding rapidly and their sprawl is resulting into manifold problems for the state as well as for the peoples. The investment on development project is unequal and there is disparity and uneven development pattern throughout the Punjab province of Pakistan. There is high concentration of basic facilities of education and health in metropolitans and other big cities. Therefore, the migration from rural to urban areas is vibrant and uncontrolled one. There are some medium to large size small towns located in between the hierarchy which can play very vital role to lesson the burden of big cities if properly developed and provided with basic facilities like education, health, employment and daily shopping. The present study was designed to identify and assess the role of these small towns that they can play in the rural development regarding health and education. Two small towns namely Farooq Abad and Khanqah Dogran in district Sheikhupura were selected randomly for this research study. The results of the study revealed that these towns are performing very good role regarding education facilities and health services and community is satisfied from their role except some improvement in the provision of basic facilities in schools and health services are needed.

KEYWORDS: Small Towns, Rural Development, Dynamics, Hierarchical, Satisfaction Level, Sprawl

INTRODUCTION

All Developing Countries are facing a problem of dynamic and vibrant expansion of their major cities, due to heavy investment in them and exorbitant potential of urbanization. Therefore most of the attention is focused on them and the small towns and the rural areas are neglected. As a result the rural population does not receive the basic needs of life such as education, health, recreation, employment, water supply, sewerage, and monthly shopping etc. So the migration towards the cities is increasing and creating immeasurable problems for the administration of the cities. Pakistan being a Developing Country is also facing the same problem. The allocation of development funds to various districts of Punjab and in other provinces is imbalance, this has resulted into different levels of development attained by each district and each city or even small town has attained the different level of development. This has resulted in to concentration of social development (education and health services) in some large cities or small towns and deprived of others. Consequently, the hierarchy of settlements is not a functional and appropriate one and therefore large settlements are growing rapidly and small ones are lagging behind due to improper decision of the Government regarding investment. Therefore, disparity in development among different districts and regions is increasing rapidly. There is a considerable regional as well as at district level variation in development in Pakistan. As in [20]a study on Development Ranking of Districts in Pakistan was found that there was a wide difference of development among the districts as well as between the small cities and large

cities and small towns as well. Similarly, as in [8] a study on "State of Development in the Punjab: A District-Wise Comparison", revealed. Since then the Government has made conscious efforts to develop the less developed areas by making specific allocations in the development budget and devising policies i.e. giving incentives to entrepreneurs to establish industries in backward and less developed areas.

It had been observed [16] that GNP growth rate was not the end, but merely a means to development. There is a overwhelming consensus at present that the purpose of development is not just to increase or enhance income but to wide peoples choices, and that these choices include a decent education-quality education, good health, cultural identity, environmental security and many other areas of human well-being. Development deal with the entire society (including marginalized sectors), not just with the economy and people must participate at all stages.

A study "Development Profile of Districts in Punjab" was conducted by Punjab Economic Research Institute (PERI) [5]. The results of the study revealed that there was highest dispersion (unevenness) in case of industrial and health sectors among various districts of Punjab. For example in Lahore, there was one doctor for 2000 persons, whereas in Hafizabad, there was one doctor for 34000 persons. The facts are that the reluctance of doctors to perform duties in small towns and cities had also affected the development of this sector. Moreover, it was found that Lahore, Faisalabad, Multan, Gujranwala and Sheikhupura were the five districts marked as top in order in the context of development. The five least developed districts were Rajanpur, Khushab, Hafizabad, Bhakkar and Layyah.

The results of a study [6] conducted at country level (both in rural and urban areas of Pakistan) by Academy of Education Planning and Management (AEPAM, Research Study No. 177), Ministry of Education; Islamabad revealed that there were many reasons for not enrolling boys in schools. Some of the main reasons were: In the opinion of 62% parents schools were not available and 58% parents considered more distance of schools. One of the reasons given by the parents for non-enrolling the girls in schools was that 67% parents complained non-availability of schools.

Pakistan's health Indicators present a very dismal picture as compared to other countries at the same level of economic development. As in study conducted in 1997 indicated that the health status of the nation was characterized by a life expectancy at birth 63 years, population growth rate of 2.8 %, infant mortality rate of 88 per thousand live-births and maternal mortality rate of 350 per 100,000 which is one of the highest in the world. Pakistan has committed through the United Nations' "*Alma Ata declaration"* to provide health facilities to its entire citizens by year 2000 [25].

It has been concluded by many research scientists that in most of the empirical research studies, per capita income, nutritional status, adult literacy and the availability of health services are included as important determinants of development status like [9], [13], [14], [15], [17], and [24].

In spite of these drawbacks and uneven development of different cities and small towns no proper step has been taken in this direction and problems of our large cities such as Karachi, Lahore, Faisalabad, Multan, Peshawar and Queta etc. are multiplying at a tremendous rate. We are sure that small settlements of today will definitely be mega polis of tomorrow and if we do not pay much heed to them the cities would end up in a big chaos. Minor or small level programmes have been taken up in the past such as Agro Villas Development Programmes but they did not bring fruit and gradually faded out.

The major components in rural development are the basic education, health, Agriculture and infrastructure. This study has been designed and conducted to determine what role small towns of medium to large size (25000-50000 population) can play or playing regarding health and educational facilities vis-à-vis to decide the catchment's area these two facilities serve if these are located in a small town. Two small towns in Sheikhupura district, located at a distance of

about 36 kms from Lahore in Punjab province named as Choorkana (old name) and Farooqabad (new name) and Khanqah Dogran were selected for this study.

METHODS

To carry out any research work, especially in the field of Social Sciences some sort of methodology has to be envisaged before hand and adopted to make the research more empirical and success [19]. The first step in research methodology is to select the universe of the research [11]. First of all a list of all small towns situated in district Sheikhupura was prepared (collected from District Government) which was taken as sampling frame of this study. At second stage sample of the research study was to be selected. As in [12] stated a simple principle or rule of thumb that "*as the size of the population increases the sample size decreases*".

This principle was the basis of sample selecting procedure for this study. Therefore, two small towns were selected randomly from the sampling frame as universe of the research. At third step two types of interview schedules were prepared with the consultation of the teacher and doctor in-charge for both education and health institutes. It has been also recommended by some researchers [10]. Therefore, the "Interview Scheduler" was used as data collection tool for surveys.

During the survey of both the small towns each health and education centre was visited and the needed information was noted down from their daily or monthly registers. Moreover, the interviews of the doctors and teachers were conducted also conducted. Some interviews of the respondents (patients and parents of students) from the surrounding areas were also conducted to ascertain their satisfaction about the provision of education and health facilities regarding their, accessibility.

The collected data were analyzed by using the Statistical Package for Social Sciences (SPSS)[1]. Some inferences were drawn from the analysis and conclusions were also made.

Yeh's Index of Satisfaction

Yeh's Index of satisfaction (YIS)[2] was used to analyze the people's satisfaction level regarding the various factors of education and health facilities in both small towns. In comparing YIS, the scale of satisfaction was converted into a 3 point Likert's scale, identifying three levels of satisfaction i.e. satisfied; no opinion (indifferent) and dissatisfied. Subtracting the number of dis-satisfied cases from the number of satisfied cases and then dividing it by the total number of responses obtain the index number. Putting it into a symbolic form, the YIS can be written into the following expression:

$$YIS = \frac{S-D}{R}$$

Where:

S = the number of people satisfied with one attribute.

D = the number of people dissatisfied with one attribute; and

R = the total number of responses

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1. Statistical Package for the Social Sciences (SPSS) was first developed at the Stanford University as separate programmes, which could solve the statistical problems. Later, the system was developed into SPSS by collecting these separate programmes at the University of Chicago.
2. YIS was developed for and first used in an analysis of housing conditions in Singapore. Stephen. H.K. Yeh, ed; "Public Housing in Singapore". (Singapore: Housing and Development Board, 1975), pp. 227-228.

This index ranges from +1 to –1. A positive value indicates that there are more respondents who are satisfied than those who are dissatisfied. The larger the value, the more intensive is the degree of satisfaction or dissatisfaction.

RESULTS

Educational Facilities

Education is basic need of today and even if we see it from economic or social point of view it is a necessity. Besides accelerating development education can also help in spreading the ideology of the nation and to help increase the per capita income. It enables people to use their capabilities and to increase their earning potential, but most fundamentally, it empowers them to generate and participate in the transformation of their lives. The alleviation of poverty and progress towards education will only take place if there is an increased and improved level of education. It is quite clear that poverty can be eradicated and sustainable development take place if there is an increased and improved level of education [2].

To achieve all these objectives educational institutions should be so adequately provided at regular intervals so that they are easily accessible. Moreover, the number of primary schools in a town should be such that they easily cater the need of the children population of that town ranging from 5 to 15 years of age. The Pakistan Integrated Household Survey [4] described that one of the major problems that impedes and adversely affects the primary school enrollment rate, thus contributing to the problem of non-attendance and low-participation rate is distance and access to primary schools. This comprehensive research study deals exactly with the same subject to find out the distance which an educational institution in a small town is serving and whether the service area is sufficient or not and if not then what should be the interval at which educational institutions should be provided.

Assessing Population having Access to High School Level Education in Farooq Abad

The old name of this small town was Choorkana and new name is Farooqabad. This is situated on Sargodha-Sheikhupura road at a distance of about 52 Kilometers from the provincial capital (Lahore) of the biggest province Punjab and 16 Kilometers from the main city Sheikhupura a district headquarter and having a population of about 50,000.There are five High Schools given at Table No.1. The table exhibits that the total number of students enrolled in high schools is 3981 out of which 2224 (55.86%) students come from within the same small urban town and 1757 students (about 44.14% of the total strength of High School students) are coming from the surrounding villages. As the statistics show that there are five high schools, which serve about 23 villages-a big population of rural areas as for as high school education is concerned. It reveals that small towns can perform their role in rural development in best way as well as can reduce the pressure of big cities as far as social facilities are concerned if located at appropriate location and provided with proper facilities.

Table 1: High Schools and Students' Enrollment Regarding Catchment's Area

S.No	Name of School	Number of Students Coming From	
		Local-Urban	Rural-Villages
1	Govt. Project High School (Co-Education)	931(59.99%)	621(40.01%)
2	Govt. Lasani High School for boys	251 (53.07%)	222(46.93%)
3	Govt. Girls High School	336(61.10%)	214(38.90%)
4	Govt. High School for boys	426(47.02%)	480(52.98%)
5	Jim Model High School for boys	280(56%)	220(44%)
	Total	**2224(55.86%)**	**1757(44.14%)**
	Grand Total	**3981**	

Determining Catchment's Area of High Schools

The Table No. 2 illustrates the number of students which come from different nearby villages along with the distances they have to travel daily to attend the school. Having a glance at the Table-2 would show that there is no systematic relationship between the students who are coming from the nearby villages and the students those who are coming from for off villages, but there exists some sort of relationship between the villages which have a better transportation network between them and the nearest small urban town.

Table 2: The Enrollment of Students in High Schools from Rural Areas-Villages and Distance

S.No	Name of Villages/Settlements	Number of Students Coming From Villages	Distance Kms
1.	Naukhar	127	3
2.	Mureedkay	126	3
3.	Dera Gujran	59	7.5
4.	Bandonkay	83	7
5.	Suchasooda	99	6
6.	Chuharkana Village-II	107	4
7.	Dera Nega	63	6
8.	Kajhar	138	6
9.	Dhillam	85	9
10.	Dera Nawaban	67	10
11.	Mukey	51	10
12.	Kot Sonda	41	12
13.	Jhamkay	33	7
14.	Kalokay	54	4
15.	Machi Kay	78	6
16.	Dada Putray	68	7
17.	Dera Gin Shehar	83	8
18.	Dera Gurdazpurian	95	4
19.	Malian Wala	57	10
20.	Dera Badurdin	53	14
21.	Nega	55	13
22.	Kot Dharam	66	14
23.	Dera Malla Singh	79	14
	Total	**1757**	**Average Distance = 8.02 Kms**

Having insight analysis of the above data it was revealed that villages like Kot Sonda, Dera Badurdin and Nega which are at an average distance of 13 Kms from the small town Farooqabad but commuting almost the same number of students from these villages as compared to Dera Nega, Dera Nawaban and Kalokay village which are at an average distance of about 7.5 Kms from Farooqabad. During research it was further probed and results disclosed the fact that the former villages are either on the main road or they are connected by tertiary level rural paved roads, so the students coming from these villages do not find it very difficult to reach to their respective schools situated in the nearest small town, as for the latter villages are concerned their distance is no doubt less from the nearest small town but due to lack of transportation facilities and local paved roads, the strength of the students is merely the same.

As for as the service area of this small town, Farooqabad is concerned regarding high schools, the maximum radius which this town is serving is about 14 Kms and average distance (catchment area) is 8.02 Kms in which it serves

about 23 villages. It may be concluded that if such small towns are provided with high schools facilities and connected with villages through paved roads, they can perform their best role in rural development. Consequently, it will reduce the pressure on nearest big cities as for as the facility of high school education is concerned. Consequently the uncontrolled and haphazard development of the big cities will be checked.

Determining Students Population having Access to Primary School Level Education

Total numbers of primary schools which were surveyed and were registered with Education Department in district Sheikhupura, situated in Farooq Abad small town were ten in number and their respective names have been given in Table No. 3, along with the total number of students which are coming from within the same town and the students commuting from the surrounding villages.

Table 3: Numbers of Primary Schools Along with Number of Students

S. No	Name of Schools	Students Coming From	
		Local-Urban	Rural-Villages
1.	Govt. Primary School Gornanakpura	203	82
2.	Govt. Primary School, Mahallah Nur Pura	123	53
3.	Govt. Primary School, Mahallah Mohammad Pura	167	62
4.	Govt. Primary School, Nadeem Colony	117	46
5.	Govt. Primary School, Nauukhar Old	124	51
6.	Govt. Primary School, Chuharkana Mandi	524	156
7.	Govt. Girls Primary School Faisal Colony	96	19
8.	Govt. Girls Primary School, Mahallah Gurnanakpura	127	29
9.	Govt. Chuharkana Model School	194	42
10.	Govt. Girls Primary School, Islampura	147	24
	Total	**1899 (76.08%)**	**597 (23.92%)**

Total number of students which are getting primary education in these nine schools is 2496, out of which 1899 (76.02%) students are local (from the same small town) and 597 come from different villages–rural area which is about 23.92% of the total strength of students. It is evident from the results that huge majority (76.02%) strength of primary schools is from the same small town because almost in each village the Govt. has established a primary school. In spit of it 597 students (23.92%) are commuting from the surrounding villages. It was further probed during the survey and it was communicated by the respondents that these 23.92% children are of those parents who can afford to send their children to the nearest small town for search of good quality education.

Determining Catchment's Area of Primary Schools

Table No. 4 shows that the catchment's area of these primary schools is at the most 8 Kms. Within which there are 12 villages from which students come to Farooqabad for getting primary level education. The average distance from the small town to serve the villages is 5.75 Kms if quality education is provided. This catchment's area can be recommended.

Table 4: The Enrollment of Students in Primary Schools from Rural Areas-Villages and Distance

S. No	Name of Villages/Settlement	Number of Students Coming From Villages	Distance Kms
1.	Naukhar	115	3
2.	Mureedkay	102	3
3.	Dera Gujran	65	7.5
4.	Bandonkay	36	7
5.	Sucha Soda	91	6

Table 4: Contd.,

S. No	Name of Villages/Settlement	Number of Students Coming From Villages	Distance Kms
6.	Chuharkana Village-II	43	5
7.	Dera Nega	22	6
8.	Kajhar	27	6
9.	Gham Kay	31	7
10.	Kalokay	39	4
11.	Sookhakay	10	8
12.	Machikay	16	6
	Total	**597**	

Average distance (catchment area) = 5.75 Kms

Assessing Population Having Access to High School Level Education in Khanqah Dogran

Khanqah Dogran is situated on Sargodha-Sheikhupura road at a distance of about 67 Kms from Lahore and 32 Kms from the main Sheikhupura city, and having a population of about 25,000 persons. This is a medium size small town as compared to Farooq Abad. It has two high schools and the same number of primary schools which are serving the inhabitants of this small town and some population of the surrounding villages, see Table No. 5. The Govt. High School for boys was established in 1932. The total number of students coming from the surrounding villages to this school is 215 which are about 44.14% of the total students enrolled. It is evident that a small town having size of 25000 populations has attracted almost 44% students of its total strength from the surrounding villages. The Govt. Girls' High School was established in 1976. The total number of girls' students coming from the surrounding villages is only 39 which are 6.6% of the total students enrolled. This indicates the poor accessibility (proximity), cultural constraints and traditional attitude for female mobility in the surrounding typical villages which are creating impedance. Therefore, the access to education (location of high school for girls at appropriate distance) is major constraint for female education. It has also been recommended in a similar study conducted in Faisalabad that the distance between home and school was found to be a detriment for girls. The farther the school the less likely it is that a girl will be able to enroll and attend school, since long distances are seen as a perceived threat to their daughter's safety (Alam and Naveed, 2001).

Table 5: High Schools and Students' Enrollment Regarding Catchment's Area

S.No	Name of School	Student Coming From	
		Local	Rural
1.	Govt. High School for Boys	272 *(55.86)	215 *(44.14)
2.	Govt. Girls High School	546 *(93.4)	39 *(6.6)
	Total	**818 **(77.0)**	**254 **(23.0)**

* = % age of total boys and girls students
** = % age of grand total

Determining Catchment's Area of High Schools

If we have a glance at Table No. 6, it illustrates that the two high schools one for boy and the other for girls are serving at least 14 surrounding villages which are situated around this small town at a distance of about 3 kms to 14 kms, thereby having a service/catchment area of 14 kms. The total number of High Schools' students which are coming from rural areas is 254 which are only 23% of the total students studying in high schools. It is evident from above results that a small town having population of 25000 can serve its total high school going population along with accommodating about 23% of its total strength from the surrounding villages. The average distance (catchment's area) is 7.98 Kms. It can be concluded that if such facility is provided in all medium size small towns then we can reduce the load of this much population which has

either to migrate to big cities or commuting to them daily for getting high school level education in the morning and leaving in the afternoon or evening when schools are closed.

Table 6: The Enrollment of Students in High Schools from Rural Areas-Villages and Distance

S.NO	Name of Village	Students Coming From the Villages	Distance in Kms
1.	Sookhekay	28	8
2.	Cheena	51	3
3.	Mala Shashoo	33	3
4.	Kalisan	14	6
5.	Goyanwali	9	7.5
6.	Chukarian	6	9
7.	Chah Sarkary Khurd	8	12
8.	Ghabhar	13	14
9.	Hukam Singh	7	10
10.	Dongay	31	2.5
11.	Salar Sydian	24	6
12.	Salar Bhatian	21	4.5
13.	Bhagokey	5	9
14.	Ratan	4	10
	Total	**254**	**Average Distance = 7.98 Kms**

Determining Students Population having Access to Primary School Level Education

As regards primary education, Khanqah Dogran is quite unlucky and has a total of only two primary schools, one for each sex. The Govt. Girls Primary school was established in 1901 and spreads on an area of 1.5 acres. The total numbers of students which are registered in this school are 171 out of which 147 (72.51%) are local from the same small town and only 24 (27.49%) students come from the villages. Government primary school for boys' was also established in 1901 and it has got total number of 15 sections for 5 classes. The total number of the students here is 612 out of which 519 (84.64%) are local from the same small town and only 94(15.36%) come from the surrounding villages.

As[22] said that low enrolment and female literacy in the country exacerbated by the low public expenditure on education which is only 1.8 percent of Gross National Product (GNP), the lowest among the South Asian countries. The report said that educational deprivation was one of major contributing factors for low human development index (HDI) and Pakistan is at bottom of the educational index among 10 countries. The literacy rate of men and women increased at a very slow pace in the fiscal years 1999 and 2002, SBP said. The report said that at district level, an analysis of educational deprivation confirmed a relationship between lack of education and human development. The Gross Enrollment rate (GER) has not been encouraging, as it was only increased from 70 percent during the fiscal years of 1999 and 2002 due to persistent low level of primary enrolment and high population growth, 5.8 million children in the age of 5 to 9 years old are still out of school and over half of them are girls.

Table 7: Numbers of Primary Schools Along with Number of Students

S.No	Name of School	Students Coming from	
		Local	Rural
1.	Govt. Boys Primary School	518 (84.64%)	94 (15.36)
2.	Govt. Girls Primary School, Imambara	147 (72.51%)	24 (27.49%)
	Total	**666 (84.95%)**	**118 (15.05%)**

Determining Catchment's Area of Primary Schools

The maximum catchments' area of these two primary schools is 7 Kms in which it covers 9 villages. The both primary schools are attracting students from 9 villages situated around the small town. The average distance (catchment's area) is 4.88 Kms from where children are commuting every day for getting primary education. Therefore, the primary school should be located in each village.

Table 8: The Enrollment of Students in Primary Schools from Rural Areas-Villages and Distance

S.No	Name of Villages	Students Coming From the Villages	Distance in Kms
1.	Slar Sydian	18	6
2.	Salar Bhatian	15	4.5
3.	Cheena	17	3
4.	Mala Shashoo	13	3
5.	Dongay	15	2.5
6.	Salar Bongla	12	6
7.	Asan	17	7
8.	Perokay	6	5
9.	Dera Joyan	5	7
	Total	**118**	**Average Distance = 4.88 Kms**

Determining the Appropriate Catchment's Area Regarding Education

It is evident from the Table 9: that the dimension of population, the town is serving at every 2 Kms radius and the number of students coming from that respective population.

Table 9: Relationships between Population, Incoming Students and Distance

Population of Served Villages	Total Incoming Students	Distance in Kms
8539	250	4
27601	765	6
44053	869	8
14235	239	10
9117	124	12
5188	107	14
Total= 108733	**Total=2354**	

It is quite clear from the table that as the radius of service area goes on increasing more villages keep on adding up and therefore sum of population dependent upon the small town increase, thereby increasing the incoming students' population. But the main criterion which is to be noted here is that up to 8 Kms, the number of incoming students increases whereas from 8 Kms to 14 Kms, the number of incoming students decreases, and therefore from this inference it is very clear that 8 Kms is the convenient distance whereas 14 Kms is the maximum serving distance. It can be commended that the small towns at the distance of 8 Kms must be fully developed for effective rural development and to reduce the pressure from big cities.

In one of the empirical studies [7] it was said in Multi-Donor Support Unit that lack of facilities and deteriorating standard of education are the main reason for decline in enrollment in state-run primary school. The report recommends improvement in formal education system so that the need for non formal basic education ad literacy enhancement is reduced. This unit calls for proper building for schools, with facilities of drinking water, electricity latrines boundary walls,

play ground and enough budgetary provision to carry out minor and major repair in school buildings. In Punjab 50% of the population age group between 5-9 years never attend school and only one percent has completed their education. About 47% of population of age group 10 and above is literate in the province. A large number of Government Primary Schools are without basic facilities, 8% of Schools are without proper building, 22% are without basic drinking water, 83% are without electricity, 62% are without latrines, 49% are without boundary walls, 77% are without play grounds and 9% of schools have no class rooms.

As in [1] said that high dropout rate is routinely experienced in our primary schools in largely attributable to the drab appearance of building, inadequate facilities and overall repulsive physical environment. Ordinary schools in our country are extremely ill-equipped, devoid of essential material resources and facilities is a most obvious and sad reality. Sights of schools working without necessities such as drinking water, proper toilets, classroom furniture, text books, electricity, fans, Window panes (with glasses), playground elements and black boards are not uncommon.

Existing Health Facilities in Farooq Abad

There are mainly 9 health centers/hospital/dispensaries which are catering for health facilities for the inhabitants of Chuharkana/Farooqabad. Out of these 9 health centers services only three hospitals are in a state to provide indoor treatment and the rest 6 only provide outdoor medical facilities to the patients. A close examination of Table No. 10 would reveal that for indoor facilities total 204 patients were able to receive medical facility out of which 125 (61.27%) local patients, from the same small town were treated monthly and only 79 (27.73%) patients from outside the town (coming from villages) were treated monthly.

Assessing the Patients who are Availing the Health Facilities

If we have a look at the outdoor patients their strength is an oversize (9950) one. The strength of local outdoor patients which are treated in all the hospitals situated in this small town comes out to be 3724 (34.69%), whereas the total number of patients which received outdoor medical aid who come from outside the town is 7011(65.31%). It is quite evident from the data, how much the people living in rural areas depend upon these health services facility and what load of patients these health centre services in small towns have to bear out monthly, and on the contrary only 3 of these health services/hospitals have indoor medical facilities with a very limited number of beds and mostly the indoor patients are referred to Sheikhupura or Lahore.

The reason for referring the patients to big urban centre is that these hospitals do not have the required medical facilities like X-ray, Ultrasound, dialysis facility, and Surgery etc. and if by some reason the pressure mounts up then the patients have to be accommodated in verandahs and sometimes in open lawns. It can be concluded that if modern health facility services are provided in such health centers located in small towns then they can accommodate many more patients than at present. It will ultimately reduce the burden on hospital located in big cities except for special treatment like by-pass, dialysis, cancer treatment etc.

Table 10: The Patients' Population Getting Health Services

S.No	Name of Hospital/Dispensary	Patient Treated Monthly				Total
		INDOOR		OUTDOOR		
		Local	Rural	Local	Rural	
1.	Civil Dispensary, Chuharkana	9	28	645	855	1537
2.	Alnoor Eye & General Hospital	25	46	321	787	1179
3.	A.P.I. Centre	-	-	180	420	600
4.	Canal Civil Dispensary	-	-	223	2566	2789
5.	P.R.P Hospital	91	5	1096	163	1355

Table 10: Contd.,

S.No	Name of Hospital/Dispensary	Patient Treated Monthly				Total
		INDOOR		OUTDOOR		
		Local	Rural	Local	Rural	
6.	M.C. Health Centre	-	-	564	425	989
7.	Rafeeq Clinic	-	-	305	865	1170
8.	Qazi Homio Clinic	-	-	173	7	180
9.	Muslim General Hospital, Chuharkana	-	-	217	923	1140
	Total	**125 (61.27%)**	**79 (37.73%)**	**3724 (34.69%)**	**7011 (65.31%)**	**9950**

Exploring the Catchment's Area of Health Facilities

It is visible from Table No. 11 that the total villages which are being served by the health facilities available in Small Town, Farooq Abad are 20 in number and the distance at which these villages are located from the small town. The maximum cutout distance is recorded as 13 Kms, which is Dera Noordin village and about 208 outdoor patients visit Chuharkana/Farooqabad monthly for health services.

Table 11: The Patients' Population Coming from Villages-Catchment's Area

S.No	Name of Village	No. of Patient Coming from Villages		Distance in Kms
		Outdoor	Indoor	
1.	Sukhakay	185	2	7.5
2.	Balkay	238	-	8
3.	Usharkay	335	3	9
4.	Kot Sonda	465	9	12
5.	Bandonkay	194	5	7
6.	Mureedkay	527	2	3
7.	Naukhar Old	589	11	3
8.	Dera Gujran	164	-	7.5
9.	Dera Noordin	208	6	14
10.	Suchasoda	647	8	6
11.	Machikay	164	-	6
12.	Jhamkay	203	-	7
13.	Kalokay	671	-	4
14.	Mukey	334	2	10
15.	Kajhar	624	10	6
16.	Dera Nega	362	6	6
17.	Dhillam	287	3	9
18.	Dera Nazaban	195	4	10
19.	Lal kay	223	3	9
20.	Naukhar New Abadi	396	5	2.5
	Total	**7011**	**79**	

Average distance (catchment's area) = 7.33 Kms

The average distance from the health facilities is 7.33 Kms which a patient has to travel to reach an appropriate health service which will not take more than an hour by local means of transport available in the rural areas. Similarly the population of these villages which is reaching monthly to these health services is massive (7090).

Similar standards are recommended by other empirical studies as [5]. It can be concluded that health services located in small town are taking a lot of pressure of rural areas' patients to deliver health services which otherwise will have to go to nearest big cities.

Health Facilities in Khanqah Dogran

As for as the health facilities in Khanqah Dogran are concerned those are really scarce in nature. It has got only two hospitals namely rural health centre established in 1962 and being run by the Government. It has got some bed strength also and can accommodate indoor patients. The other is Shamim Hospital, being rum by a private doctor and it does not have indoor treatment facilities.

Assessing the Patients who are Availing the Health Facilities

The table No. 12 portrays that both hospitals serve the local population and the patients coming from the surrounding villages. The rural heath centre alone serves about 5155 indoor-outdoor patients combined monthly where as Shamim hospital caters for only 1410 patients. Total 6565 patients are getting health services in a month from one small town which is very encouraging amount. On the other hand if this facility is not available in small towns then this much amount of patients has to travel and put pressure on health services located in the nearest big cities.

Table 12 The Patients' Population Getting Health Services

S.No	Name of Hospital	Patient Treated Monthly				Total
		Indoor		Outdoor		
		Local	Rural	Local	Rural	
1.	Rural Health Centre	58	205	687	4205	5155
2.	Shamim Hospital	-	-	268	1142	1410
	Total	**58**	**205**	**955**	**5347**	**6565**

Exploring the Catchment's Area of Health Facilities

Table-13 defines the total number of villages which rely upon Khaqah Dogran for health services. The total outdoor patients are 5347 who come in a month for treatment from the 19 villages and the indoor patients having a figure of 205. There are qualified MBBS doctors and Leady Health visitor in rural health centre. The maximum distance from where people come for their treatment is Lunda village which is at a distance of 13 Km, from Khanqah Dorgan; even then 97 patients are monthly commuting from this village for getting health services from small town.

The average distance from the health facilities is 7.34 Kms which a patient has to travel to reach to an appropriate health service which will not take more than an hour by local means of transport available in the rural areas. Similarly the population of these villages which is reaching monthly to these health services is colossal (5347). Similar standards are recommended by other empirical studies as in [5]. It can be concluded that health services located in small town of medium size are taking a lot of pressure of rural areas' patients to deliver health services which otherwise will have to go to nearest big cities and put pressure on health service that may create mess.

Table 13: The Patients' Population Coming from Villages-Catchment's Area

S.No	Name of Village	No. of Patients Coming from the Villages		Distance in Kms
		Outdoor	Indoor	
1.	Dongay	523	8	2.5
2.	Salar Bhatian	452	17	4.5
3.	Salar Syedan	392	9	6
4.	Tikha	206	13	4
5.	Mala Shahshoo	437	21	3
6.	Chah Sarkari Khurd	119	-	12
7.	Ghanian	222	11	7
8.	Qila Sujan Singh	263	13	6

Table 13: Contd.,

S.No	Name of Village	No. of Patients Coming from the Villages		Distance in Kms
		Outdoor	Indoor	
9.	Lunda	97	-	14
10.	Cheena	648	19	3
11.	Sawankay	137	6	11
12.	Bandokay	159	9	10
13.	Chapian Wali	587	11	4.5
14.	Adand	127	-	9
15.	Mianwali Dogran	172	18	8
16.	Mianwali Fakiran	186	15	10
17.	Brodha	202	17	8
18.	Adaan	107	7	12
19.	Kalisian	311	11	5
	Total	**5347**	**205**	**Average Distance = 7.34 Kms**

Determining the Appropriate Catchment's Area and Inferences Drawn Regarding Health Facilities

Table-14 shows the total population, the town is serving at every 2 Kms, radius and the number of patients coming from the respective population for getting the indoor and outdoor health services.

It is quite clear from the Table 16 that with the increase in the service area of the small towns the dependent population increases because the number of villages is increased. But the main point which is to be noted here is that due to the lack of health facilities in the rural areas, we find a mixed percentage of patients coming from these village to the small town and the maximum distance from where the patients are coming is 16 Km.

Table 14: Relationships between Population, Incoming Students and Distance

Population of Served Villages	Total Incoming Patients		Distance in Kms
	Indoor	Outdoor	
8579	16	985	4
27601	18	2348	6
44053	15	1269	8
54235	3	689	10
79117	9	864	12
5188	-	-	14
5278	6	208	16

In the light of above it can be concluded health services of the level as available in these small towns should be provided in all those small towns which are located within circle of 16 Kms. This will result in good health standards of the nation and will curb the unnecessary sprawl of big cities.

Measuring Satisfaction Level of the Respondents Regarding Provision of Education Facilities and Health Services in Small Towns

The level of satisfaction of users gives a very useful yardstick to measure the accessibility and quality of any service like education and health. The higher the level of satisfaction, the more effective is the service, as community satisfaction is the utmost objective of all development projects as well as provision of any facility of service. The personal characteristics have an extremely important effect on community satisfaction [18].

Yeh's Index of Satisfaction is very useful measure for the level of satisfaction. It gives a precise and comparable figure which indicates the opinion of the respondents about a particular facility or service. It was used in this study and was further developed composite indices to give an overall picture of the education and health provision in the both small towns.

Table 15: Indices of Satisfaction with Various Aspects of Education Facilities and Health Services

S.No	Elements of Education Facilities and Health Services	Farooq Abad	Khanqah Dogran
	EDUCATION FACILITY	**Index of Satisfaction**	**Index of Satisfaction**
1.	Location-Accessibility	0.887	0.878
2.	Quality of Teaching at Schools	0.673	0.643
3.	Availability of basic facilities at school	0.512	0.517
4.	Interaction of SMCs with parents	0.511	0.531
5.	Availability of local transport facility	0.775	0.782
6.	Connection with local-tertiary road	0.723	0.753
	Average Education Facility Index	**0.680**	**0.684**
	HEALTH SERVICES		
1.	Location-Accessibility	0.879	0.891
2.	Facilities Available at Health Service	0.519	0.513
3.	Quality of Health Services	0.527	0.510
4.	Behavior of Doctors	0.515	0.499
5.	Availability of Local transport facility	0.791	0.776
6.	Connection with local-tertiary road	0.714	0.697
	Average Health Services Index	**0.657**	**0.647**
	COMPOSITE SATISFACTION INDEX	**0.668**	**0.665**

Table-15 depicts the respondents' level of satisfaction with different aspects related to education facilities and health services in both small towns. It is evident that a good level of satisfaction in case of education facilities and health services in both small towns has been estimated. Regarding education facilities a medium level of satisfaction in case of availability of basic facilities at schools is estimated. Similarly, in respect of health services a medium level of satisfaction in case of facilities available at health services, quality of health services and behavior of doctors has been estimated.

A similar study was conducted in low-income areas of Faisalabad city. The satisfaction level of the respondents was assessed in case of provision of facilities in schools under a community development project. The parents were not satisfied before the implementation of this project but they were highly satisfied and feeling pleasure to send their children to public operated schools after provision of facility under this project [21].

Therefore, it can be concluded that if the availability of basic facilities in schools and facilities available at health services centers (dispensary/health centre/hospital) are improved then the small towns can play the best role in rural development and pressure of rural population regarding primary, elementary and secondary education and health services on big cities can be reduced substantially.

CONCLUSIONS

After thoroughly analyzing the data we arrived at very interesting conclusions which are placed in detail as under:

- The maximum service distance of a small town having medium to large size of population (25000-50000) for high school and primary school is 14 Kms and 8 Kms respectively.
- The convenient cutout distance for high and primary school is 8 Kms and 5 Kms, respectively.

- Majority of the students for primary and high level education facility located in small towns come from within an area of 8 Kms, in radius.
- The maximum distance from where the patients are coming for availing health facilities of small town is 16 Km.
- The average distance from the health facilities is 7.34 Kms which a patient has to travel to reach to an appropriate health service which will not take more than an hour by local means of transport available in the rural areas.

On the basis of above conclusions the following recommendations or proposals are made:

- To improve the existing facilities of health and education in small towns so that it can serve conveniently the inhabitants of its own area as well as the population falling in their catchments' area. This will reduce the pressure on major cities.
- The links (tertiary roads) between the rural areas and the small towns should be further improved so that a higher percentage of rural people can be benefited from health and education facilities available in the small towns.
- A primary school should be opened in every village so that every child falling in the age group of 5-10 years can get basic education in their respective villages.
- Dispensaries in every village should be provided so that the patients falling to minor diseases could be treated in the same village.
- Education facilities of High school level as available in both small towns under study should be provided in all other small towns of having the same population size which are located within in a circle of 14 Kms.
- Health services of the level available in these both small towns should be provided in all other small towns which are located with in a circle of about 16 Kms.

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