DISSERTATION

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TOPIC

- “A study on Knowledge, Attitude and Practices regarding Eye Health care and willingness to pay for spectacles among the slum population of Chandigarh.”

INTRODUCTION

- Visual impairment is a global public health problem.
- As per WHO 285 million people suffer from visual impairment, of which 39 million are blind. Most of the morbidities occur in developing countries. India accounts for 12 million blind people(1 percent), the majority of whom are over 50 years of age.
- Globally, more than 80% of all blindness occurs in people above 50 years and 75% - 80% of all blindness is avoidable.
- Although refractive errors account for 19.7 percent among the age group of 50 years and above, it accounts for almost 80 percent in 5-15 years of age group.
- National Programme for Control of Blindness (NPCB) was launched in the year 1976 as a hundred percent centrally sponsored scheme with the goal to reduce the prevalence of blindness. However, despite all such efforts by the Government, prevalence of blindness is still high in India , especially among the poor population residing in urban slums and rural areas..

RATIONALE

- According to NPCB Pilot Survey 2001-2002, the major blinding conditions in above 50 year population are Cataract (62.6%), uncorrected refractive errors (19.7%), corneal opacity (0.9%), Glaucoma (5.8%), Posterior segment disorder (4.7%), surgical complications (1.2%), Posterior capsular Opacification (0.9%) and Others (4.1%).
- One of the objectives of NPCB was “to enhance community awareness on eye care”. This could have been possible by laying adequate stress on preventive measures, but not much has been achieved in this context and is evident by the high prevalence rate which denotes failure to dissipate knowledge and convert knowledge to practice.
- Most of the studies on eye healthcare have been conducted in the rural areas. Eye health in urban slums has been less delved due to the perception that service availability in urban areas is better than in rural areas. Despite the fact availability of eye care services is less problematic in urban areas; these services are not necessarily accessible, particularly for marginalized population such as slum dwellers.

RESEARCH QUESTIONS

- What are the attitude and practices around eye care in slum dwelling communities: What are the main reasons for consulting, where do patients go and why? What is the perceived advantage of each type of facility?
- What is the willingness-to-pay (WTP) for spectacles among slum dwellers?
- What are the characteristics of health providers delivering services to slum communities?

OBJECTIVES

- To assess the knowledge, attitude and practices related to eye health care among slum-dwellers.
- To assess the causes of avoidable blindness and visual impairment as per people's perception in slum population near Chandigarh.
- To assess slum-dwellers capacity and willingness to pay for spectacles.
- To collect information on health providers that are delivering eye care services to slum communities.

RESEARCH METHODOLOGY

- **Study Design**: Descriptive, Cross Sectional
- **Study Population**: Slums in Chandigarh
- **Study Period**: 3 months (February 2016- April 2016)
- **Sample size**: Assuming prevalence rate of refractive errors in city at 25.5%

$$n=\frac{Z^2pq}{e^2}$$

Where: Z=1.96

p(prevalence) = 0.255

q=1-p =1-0.51=0.745

e (precision)= 0.05 & No response error= 10%

Size is calculated as = 292+29= **321**

- **Sampling Technique**: Multistage Sampling Technique was adopted.

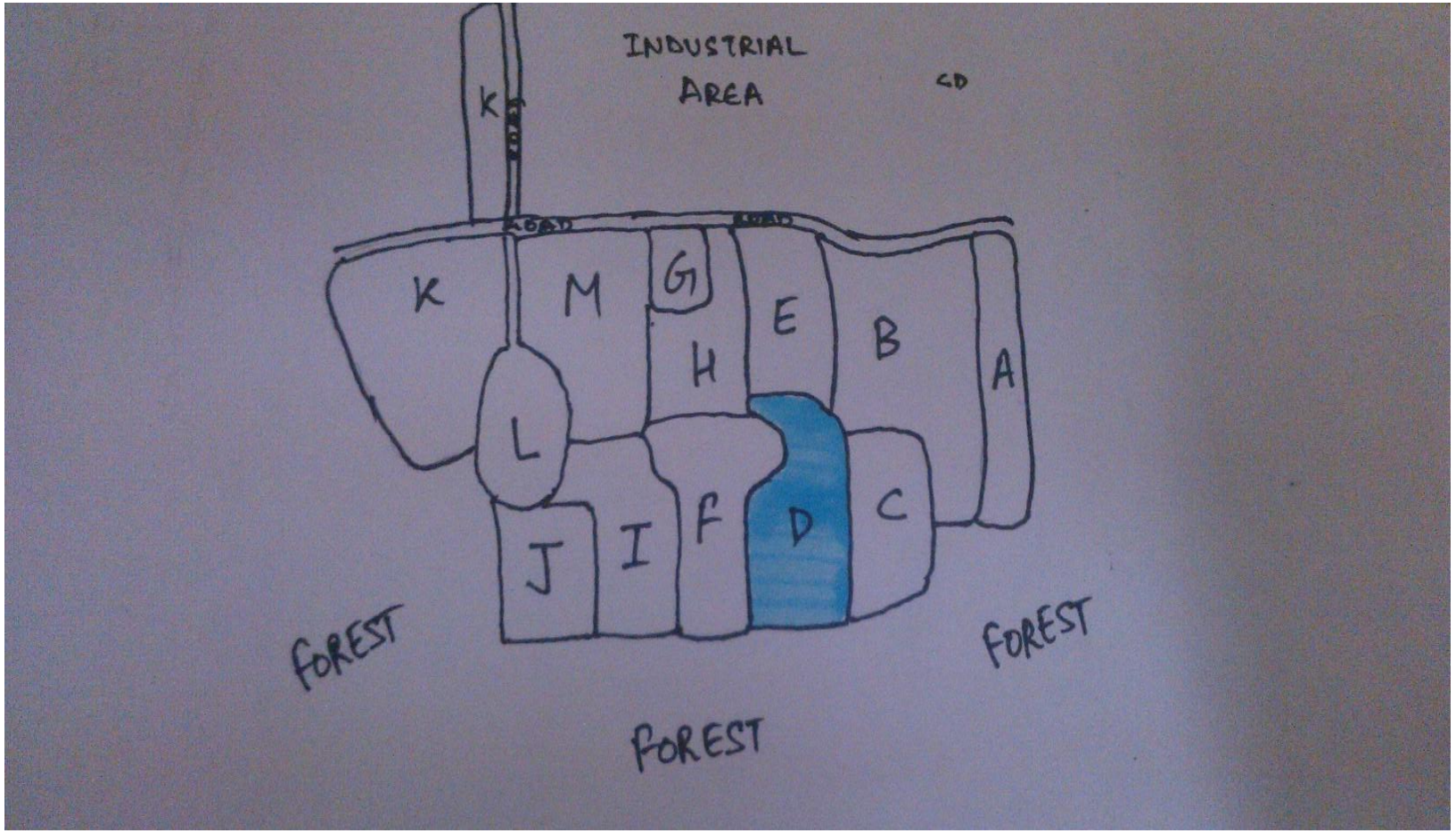
1. Slum was identified from a total of four major slums which were available till 2013 i.e. colony no. 5, Sector 52 (Janta colony, Nehru colony, Pandit colony, Adarsh Colony), Bapu Dham Colony and Colony no.4 (Industrial Area). Out of these three had been demolished and the residents have been rehabilitated to one bedroom apartments. Therefore, colony no. 4 with a population size of over 20,000 had been selected for data collection.

2. The selected slum has been divided into 12 blocks as shown in the map, taken from Civil Dispensary- CITCO. Each block houses 300-350 households.

3. Lottery method was used to randomly choose a block.(Block D)

4. Right hand rule was adopted to cover 321 households.

COLONY NO.4



METHOD OF DATA COLLECTION

- Personal interview using the following data collecting tools:

1.A structured questionnaire was used for the household survey.

Household survey was done on the basis of availability of respondent preferably 18 years and above, in selected households of Colony No.4 , Chandigarh.

2.Facility survey was conducted in most popular public and private eye care providers selected from the city; preferably conducted with the facility owners/ staff of the facility. A semi structured questionnaire formed the basis for collection of maximum information as possible and provided.

ETHICAL CONSIDERATIONS

- The objectives of the study were explained to the respondents prior to interviews being conducted. Verbal consent was obtained from each respondent after clarifying the confidentiality and voluntary participation features of the study.
- Similarly, staff or facility owners were explained about the study, and its objectives and verbal consent was seeked before taking information on the facility as much as was possible and provided.

DATA ENTRY AND ANALYSIS

- The data was entered and analyzed in SPSS version 16.0. Proportions of respondents on various variables were calculated at 95 percent Confidence Interval and Precision at 5 percent.
- To check a few associations Chi square test was run between dependent and independent variables.

RESULTS

Table 1. Socio-Demographic and Economic Profile of Respondents (N=321)in slum in Chandigarh.

FEATURE	NUMBER (N)	PERCENTAGE (%)
1. GENDER		
Male	97	30.2
Female	224	69.8
Total	321	100.0
1. AGE		
18 TO 29 years	122	38
30 to 39 years	100	31.2
40 to 49 years	53	16.5
50 to 59 years	28	8.7
60 years and above	18	5.6
Total	321	100.0

Table 1 continued…

FEATURE	NUMBER (N)	PERCENTAGE (%)
EDUCATIONAL STATUS		
Illiterate	142	44.2
Below primary education	9	2.8
Primary education	36	11.2
Middle education	39	12.1
Secondary education	43	13.4
SSC/HSC equivalent	35	10.9
Graduate	15	4.7
Diploma/Certificate	12	0.6
RELIGION		
Hindu	295	91.9
Muslim	22	6.9
Others	4	1.2
Total	321	100.0

Table 1 continued…

FEATURE	NUMBER (N)	PERCENTAGE (%)
OCCUPATIONAL STATUS		
Salaried	48	15.0
Daily Laborer	28	8.7
Self employed	26	8.1
Not paid	219	68.2
Total	321	100.0
MONTHLY FAMILY INCOME		
Rs 5000 and Below	133	41.4
Rs 5000- Rs 10,000	165	51.4
Rs10,001- Rs 15,000	15	4.7
RS 15,001- Rs 20,000	5	1.6
Rs 20,000 and above	3	0.9
Total	321	100.0

Knowledge, Attitude and Practices regarding common Eye care problem(s):

- Around three-fifth (62.9 percent) of the respondents stated as having knowledge of at least one eye problem/disease.
- Blurred vision was the most common one (54 percent), followed by abnormal eye secretions (around 17 percent) and Redness (around 12 percent) as reflected in table 2 below.

Table 2. Most Common Eye Health Problem(s) heard by respondents in slum in Chandigarh (N=202)

Most Common Eye Health Problem	Number (N)	Percentage (%)
Redness	25	12.4
Abnormal eye secretion	34	16.8
Blurred Vision	109	54.0
Pain	22	10.9
Itching	11	5.4
Others	1	0.5
Total	202	100.0

Table 3. Source of Information for the respondents who had heard about eye problem(s) in slum in Chandigarh. (N=202)

Source	Number (N)	Percentage (%)
Family/ Friends	144	71.3
Community Health Worker	20	9.9
Pamphlet/ brochure	1	0.5
TV/Radio	32	15.8
Newspaper	3	1.5
Other	2	1.0
Total	202	100.0

- More than three-fourth (78 percent) of the respondents knew where to avail eye healthcare services when in need and 88 percent cited various government setups that provide eye healthcare services. Least was known about charitable clinics (one percent).
- As far as most probable cause of eye problem(s) was concerned, one-fourth (25 percent) agreed to unhygienic conditions to be the cause, followed by increasing age cited by one-fifth (20 percent) of the respondents, straining of eyes by 13 percent and infection by 10 percent.

- Eighty seven percent of the respondents were of the view that eye health problem(s) can be prevented by maintaining cleanliness, regular hand hygiene and balanced diet.
- Around 98 percent of the respondents were willing to seek healthcare service when in need and 38 percent did feel the need to avail the eye care services and had visited some or the other provider within the past year (28.7 percent) as compared to 13.1 percent who visited within the past month.
- Of those who felt the need to seek consultation from an eye care service provider, less than one-third (29 percent) of the respondents did not go.

Table 4. Reasons for not visiting eye care facility by respondents who recently felt the need in slum in Chandigarh (N=35)

Reason for not visiting eye care facility	Number (N)	Percentage (%)
Wait and watch	8	22.9
No willing to pay	4	11.4
Other priorities for spending	6	17.1
Not legible to make decision	1	2.9
No one to accompany	6	17.1
No time	10	28.6
Total	35	100.0

Table 5. Most recent service facility visited (N=87) by respondents who recently felt the need in slum in Chandigarh.

Service Facility Visited	Number (N)	Percentage (%)
Government Facility	64	73.6
Private hospital	9	10.3
Charitable Clinic	4	4.6
Optical shop	2	2.3
Pharmacy	2	2.3
Other	6	6.9
Total	87	100.0

Table 6. Most common reasons for choosing the eye care service provider by respondents who recently felt the need in slum in Chandigarh. (N=87)

Reason for visiting	Number (N)	Percentage (%)
Nearness to house	19	21.8
Easy to access	5	5.7
Good attitude of provider	2	2.3
Less waiting time	3	3.4
Trustworthy and acquaintance	1	1.1
Availability of Medicine	3	3.4
Free or Low cost service	43	49.4
Good quality of care	10	11.5
Other	1	1.1
Total	87	100.0

Attitude and Behaviour towards preventive eye care among respondents of slum in Chandigarh.

Figure 1. Percentage of respondents stating a better care method (N=321)

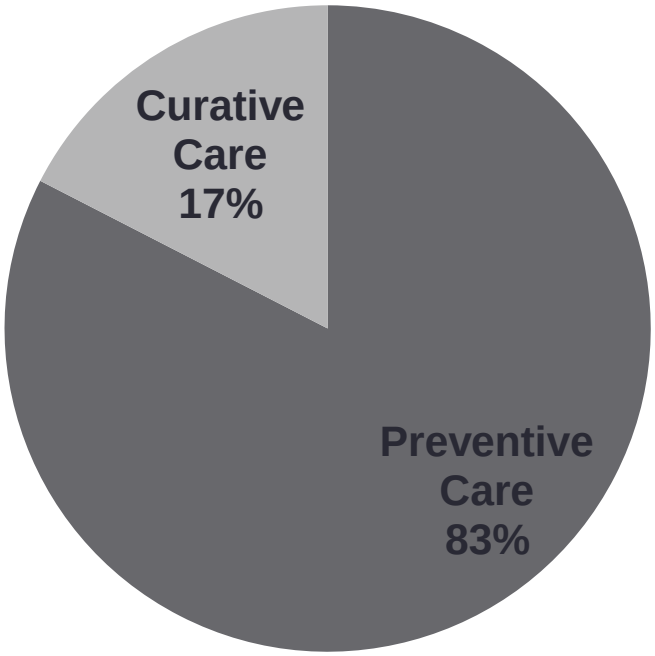
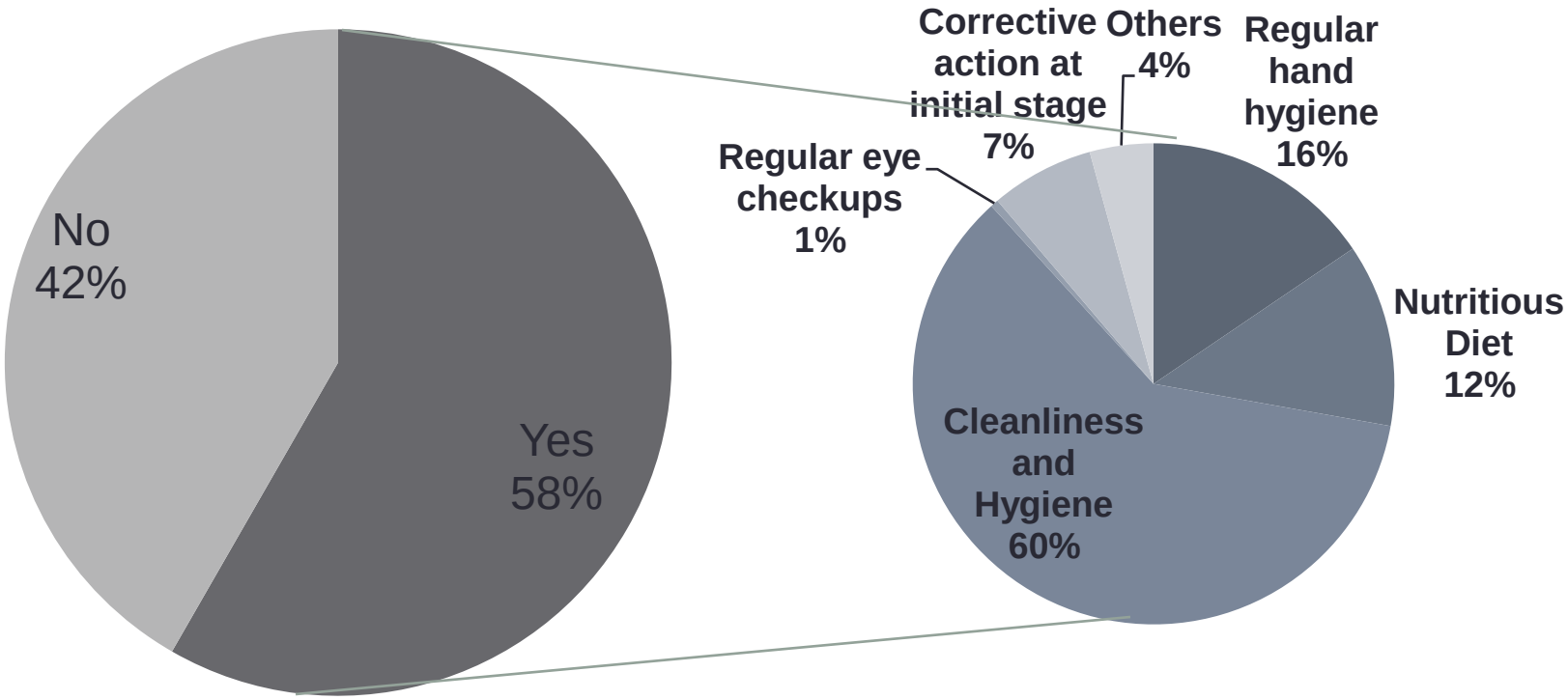


Figure 2. Percentage of respondents following at least one preventive measure



WILLINGNESS AND CAPACITY TO PAY

- Around 89 percent of the 321 respondents were willing to wear spectacles if need be arises.
- And for those willing to pay for the spectacles, mean paying capacity of 284 respondents was Rs 595, while 37 of them did not know how much they would pay depending on need and availability of funds.
- Around 58 percent of the respondents stated that it would be somewhat difficult for them to pay for the treatment (spectacles in this case), and two-third (66 percent) of the respondents would have to arrange from their monthly income or reduce household consumption for some time for around one-fifth (19 percent) of the respondents or manage from their savings (nine percent). Only two percent said that they would have to borrow from lenders to pay.

- For majority of the respondents (41 percent), their husbands were responsible for taking decision for spending money on their treatment.
- Ninety-nine percent were sure, that the decision maker would be willing to pay for the treatment.

SIGNIFICANT ASSOCIATIONS

- Socio demographic variables like marital status, educational status, employment status, showed statistically significant association (at $p<0.05$) with exposure to knowledge about any eye health problem / disease.
- Positive associations ($p< 0.05$) between certain independent factors such as age, marital status and income and the recently felt need to avail eye care service.
- Similarly an approaching significance ($p= 0.053$) was found between the increasing age of the respondent and theirs following of preventive measures for eye care.

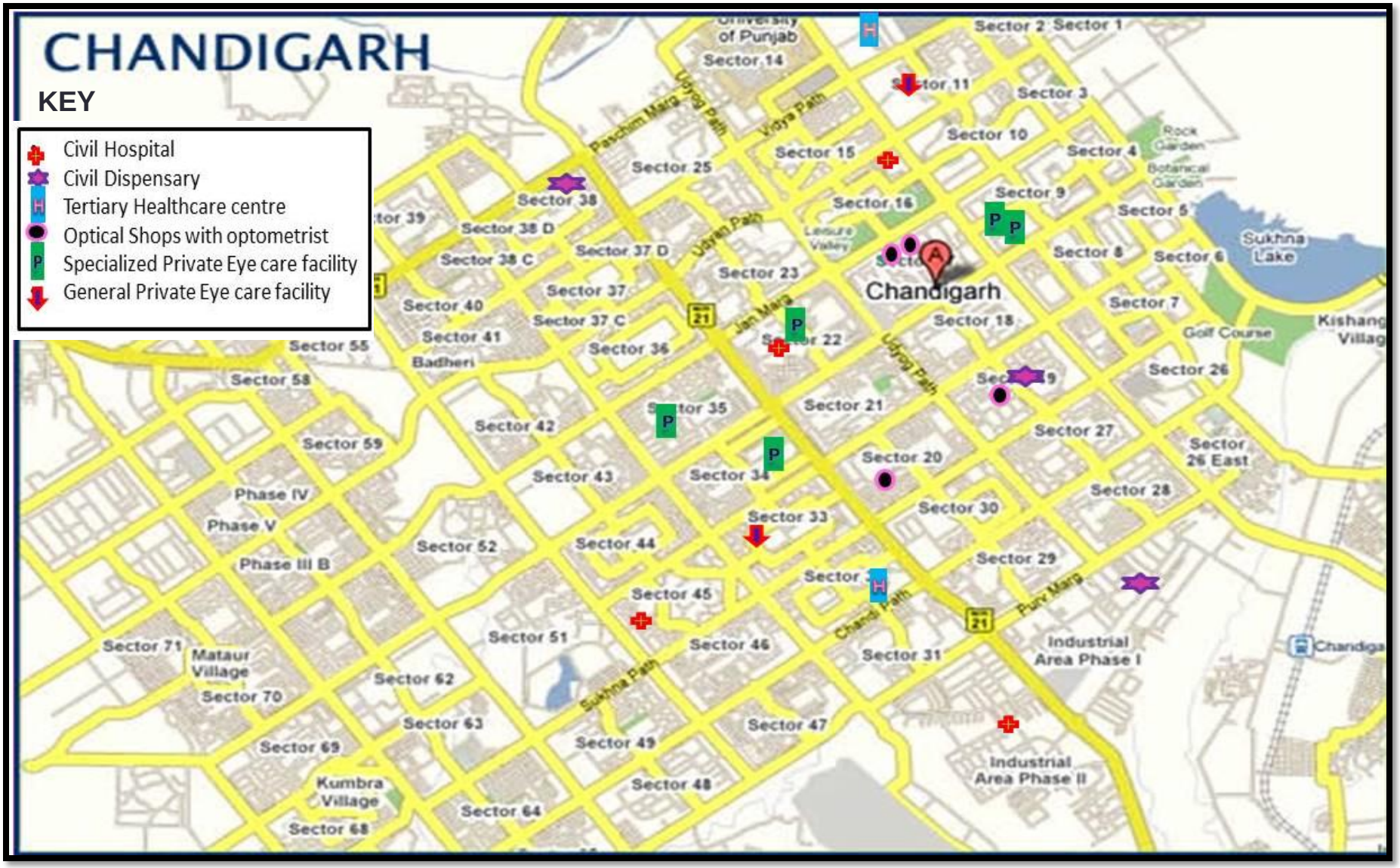
- Another significant association was found between gender and the willingness to pay for preventive and corrective measures (p= 0.032).
- Another positive association was found between the decision maker’s willingness to spend on treatment and monthly income (p= 0.008).

HEALTHCARE PROVIDERS IN CHANDIGARH

- Two main tertiary care hospitals in the city are Government Medical College and Hospital, Sector-32, and PGIMER that fall under the public ownership domain.
- Secondary Hospitals are five in number where mostly OPD consultations and minor eye care procedures are carried.
- 26 Civil Dispensaries are functional, with referral services and only three providing refraction services. One CD, Sector-19 is exclusively devoted to School children, where under NPCB, spectacles are given to those in need, free of cost.

- Major private players are four in number, all operating for profit and located in central Chandigarh, located in adjacent sectors.
- Half of them carry out fortnightly or monthly eye camps in slum or rural areas and sponsor few needy patients for the entire cost of treatment.
- Three of four do provide services under government Healthcare plans (e.g. CGHS/ ECHS/ESIS). All of them have tie-ups with TPAs or Private Health insurance. Major source of their facility income is from Patient fees (OOP expenditure).
- All operate six days a week, both during morning hours and evening hours dealing with OPD Consultations and surgeries daily.
- They have an in house or either outsourced optical shops and pharmacy in their centers. All are day care centers and do not have laboratory services.
- Minimum Consultation charges are Rs 400, although subsidized rates of Rs 100-200 are also provided for poor and needy. Minimum cost of Spectacles is Rs 250 and for Cataract Surgery is Rs 5000.

Map of Chandigarh showing Public and Private eye care facilities.



CONCLUSION

- The study concludes that there is somewhat a high proportion of awareness regarding ocular morbidities in slum population.
- Most of the respondents learn about various causes, preventions and treatments from their surroundings and are affected by their opinions.
- The demand for service is low and constrained by certain factors, such as knowledge and education, costs of services and low prioritization of health over other issues.
- Although cause is known, yet respondents overlook the long term consequences.
- The monthly income does not suffice the amount needed to be spent on corrective measures, yet in times of need, urban poor cut on their expenditure and consumption to meet the need.
- There is an unequal distribution of services and the high number of specialized eye care, private for profit providers have an impact on access to eye healthcare services for the urban poor by decreasing affordability thereby overburdening and overcrowding public health providers.

SUGGESTIONS

- More emphasis needs to be given to **awareness campaigns and changing behaviour/attitudes** in order to increase adoption of preventive measures and service uptake in case of need.
- A **PPP** between would prove to be beneficial to provide low cost treatment and spectacles for the urban poor and needs to be looked upon. However, a full proof mechanism is needed to identify the real needy and enable them to avail eye healthcare services. For this a wide array of **different stakeholders** directly and indirectly involved in providing eye care services would be needed.
- There is a need to assure that **correct information reaches the masses** and they should benefit from the services made available by public and private eye care providers equally. Robust campaigning needs to be undertaken, to bring in line the people's perception with the reality. For this involvement of **community based organisations** can prove helpful as they have an easy acceptability and access in the community.

- The WTP for spectacles shows the willingness of the community members to pay for their health based needs. Hence, a **provision of corrective measures (e.g. spectacles) at bare minimum cost** should be made available. But a mechanism to filter real needy from those misusing the services needs to be developed.
- **Interventions at multiple levels** would help in reaching out the neglected masses, this could be achieved with the help of NGOs and public, private facilities.
- **Programmes and policies** should such be framed keeping in mind the need and provision of eye care services available to masses. Separate budget heads to counter avoidable blindness will help.
- **At risk populations need to be taken special care of**, such as regular check ups for diabetic, old aged, children and slum communities.

THANK YOU