

CHAPTER IV

RESULTS

This cross-sectional study was conducted in Shree Rana-Ambika Shah Eye Hospital, Nepal during the month of February 2006. Direct interview was carried out with 189 respondents to explore the treatment-seeking behavior and extent of severity of eye injury. Following factors were assessed using structured questionnaires: socio-demographic characteristics, knowledge/information, risk perceptions, source of information, accessibility, and treatment-seeking behavior and clinical examination of patients was performed. The results obtained from this study will be presented in the following sections:

Part I

4.1 Clinical examination report and treatment seeking behavior of the respondents

Clinical examination of the patients was carried out to assess the severity of eye injury. More than one third (39.1%) had severe injury, less than one third (30.7%), (30.2%) had moderate and mild injury respectively. The mean (SD) time interval for treatment seeking after injury at eye hospital was 1.49(0.501) day and the median were 1 day. More than half (50.8%) of the patients visited eye hospital within one day to seek treatment for eye injury.

Table 4.1 Number and percentage of respondent's classified according to severity of injury

Severity of eye injury	Number	Percentage
Mild	57	30.2
Moderate	58	30.7
Severe	74	39.1

Table 4.2 Number and percentage of treatment-seeking behavior of eye injury patient

Particulars	Frequency	Percentage
Time interval for seeking treatment at eye hospital (days)		
Less than or equal to 1 day	96	50.8
More than 1 day	93	49.2
Mean= 1.49, SD= 0.501, median 1, min. = 1, max. = 2		

Part II

4.2 Socio-demographic data

The mean (SD) age of the respondents was 33.52 (16.16) years old and a median were 30 years old. About quarter (23.8%) respondents were between 15-19 years old, quarter respondents (24.9%) between 20-29 years old, and less than quarter respondents (21.7%) equal to or above 50 years old. About two third (66%) respondents were male. More than half respondents belonged to Indian nationality (58.2%). About half (47.1%, yadav, teli, kurmi) of the respondents were of Terai caste followed by Brahman/Chhettri (18%) and the least (9.0%) were Indigenous group. More than two third (71.4%) respondents were married. About half (42.9%) of the respondents never attended school followed by primary school (23.3%), and higher education (13.8%). More than one third (37.6%) of the respondents were farmers followed by farm/factory workers (22.8%), students (21.2%), and house wives (13.2%). Majority of the respondents did not disclose their monthly income (65.6%), of the remaining respondents most earned NRS 1501-4000 (1\$=75NRS) (15.3%).

Table 4.3 Number and percentage of socio-demographic characteristics of the respondent

Characteristics	Number (n = 189)	Percentage
Age (years)		
≤19	45	23.8
20-29	47	24.9
30-39	31	16.4
40-49	25	13.2
≥50	41	21.7
Mean±SD= 33.52±16.16, median= 30, minimum= 15, maximum= 77		
Sex		
Male	125	66.1
Female	64	33.9
Nationality		
Nepali	79	41.8
Indian	110	58.2
Caste/ethnicity		
Brahman/Chhettri	34	18.0
Indigenous	17	9.0
Dalit	28	14.8
Terai Caste	89	47.1
Muslim	21	11.1
Marital status		
Unmarried	53	28.0
Married	135	71.4
Widow	1	0.5
Educational status		
Never attended school	81	42.9
Primary (grade 1-5)	44	23.3
Secondary (grade 6-10)	38	20.1
Higher education	26	13.8
Occupational status		
Farmer	71	37.6
Farm/factory worker	43	22.8
House wives	25	13.2
Service holder	10	5.3
Student	40	21.2
Monthly income (Nepalese rupees)		
NRS<1500	17	9.0
NRS1501-4000	29	15.3
NRS>4000	12	6.3
Not stated	124	65.6
Mean = 3114(2539) , Median = 2500, min =333, max = 15000 q11500 q34000		

Part III

4.3 Knowledge/information about eye injury

This section includes knowledge/information of respondents that has 17 statements on knowledge part and four questions on information part regarding causes, symptoms, protection/prevention, treatment and complication of eye injuries. There were five statements asking the patient about causes of eye injuries. Majority of patients (79.4%) answered flying particles, sparks, and heated object as the cause of injury, branch, leaf, and stick injury accounted for (67.2%), fist/ball injury accounted for (51.3%), and injury due to fall or accident accounted for (45.0%). Very few patients knew that fall of acid or alkali to the eye may cause injury. There were four statements in the symptoms sub section. Patients considered pain in the eye (87.8%) as main symptom, followed by watering of eye (75.7%), and visual disturbances (63.5%). There were seven statements in the protection/prevention sub section. About two third (64.6%) patients immediate reaction to some foreign body in the eye was to wash face with clean water, more than half (53.4%) patients would seek treatment from nearest primary care center/eye hospital. Regarding the use of protective devices half the patients (51.9%) considered eyeglass, less than half (40.2%) considered goggles, few patients would use face mask/face wrap and plastic face shield. There was one statement in this sub section. High majority (93.1%) of the patients stated to visit Eye hospital/Primary care facilities in case of eye injury. There were four questions in this sub section. Majority of patients (85.2%) stated that eye injury could be protected. Most of the patients (82.0%) answered that injury to eye can be prevented. High majority of patients (93.7%) stated that prevention of injury is better than cure. Overwhelming majority (93.7%) stated that complication of eye injury could lead to blindness.

Table 4.4 Number and percentage of responses to statements on knowledge regarding eye injury (n=189)

Particulars	Number	Percentage
Causes of eye injuries		
Fist/ball injury to the eye	97	51.3
Branch, leaf, stick injury to the eye	127	67.2
Injury due to fall or accident	85	45.0
Fall of acid or alkali to the eye	5	2.6
Injury due to flying particles, sparks, heated object	150	79.4
Symptoms of eye injury		
Pain in eye	166	87.8
Watering of eye	143	75.7
Irritation of eye	29	15.3
Visual disturbance	120	63.5
Immediate reaction if something falls in eye		
Wash your eye with clean water	122	64.6
Protect your eye from farther harm	10	5.3
Seek treatment from nearest primary care center/eye hospital	101	53.4
Protective devices used in protecting eye injury		
Goggles	76	40.2
Eye glass	98	51.9
Face shield plastic	7	3.7
Face mask/face wrap	13	6.9
Mode of treatment of eye injury		
Traditional healer	13	6.9
Eye hospital/Primary care facilities	176	93.1

Table 4.5 Number and percentage of responses to questions on information regarding eye injury (n=189)

Particulars	Number	Percentage
Protect yourself from eye injury		
Yes	161	85.2
No	28	14.8
Can eye injury be prevented		
Yes	155	82.0
No	34	18.0
Prevention of eye injury better than cure		
Yes	177	93.7
No	12	6.3
Complication of eye injury lead to blindness		
Yes	184	97.4
No	5	2.6

4.4 Knowledge score level of the respondents regarding eye injury

For the statistical purpose the knowledge/information section was separated into knowledge part with 17 statements and information part with four questions. The mean (SD) knowledge level of the respondents was 8.07(1.79) and the median 8. Less than half (40.7%) of the respondents had moderate knowledge, more than one-third (37.0%) respondents had low knowledge, and less than quarter (22.2%) respondents had high knowledge. The mean (SD) information level of the respondents was 3.58 (0.825) and the median four. More than three quarter (76.7%) of the respondents had high information.

Table 4.6 Number and percentages of respondent's knowledge score level

Particular	Number	Percentage
Low (≤ 7)	70	37.0
Moderate (8-9)	77	40.7
High (>9)	42	22.2
Mean = 8.07, SD=1.79, median= 8, min=4,max=13, q1= 7, q3=9		

Table 4.7 Number and percentage of respondent's information score level

Particular	Number	Percentage
Low (<3)	44	23.3
High (>3)	145	76.7
Mean = 3.58, SD= 0.825, median = 4,		

4.5 Treatment-seeking behavior

This section includes two questions. Less than half (43.9%) of the patients answered that they would seek first treatment from eye hospital on sustaining eye injury, more than quarter would seek treatment from the Pharmacy shop.

Table 4.8 Number and percentage of treatment-seeking behavior of eye injury patient

Particulars	Frequency	Percentage
First treatment-seeking after sustaining eye injury		
Pharmacy	53	28.1
Primary care facilities	24	12.7
Private practitioner	29	15.3
Eye hospital	83	43.9

4.6 Risk perceptions about eye injury

This section includes nine statements. More than half (55.6%) patients perceived that minor eye injury was a serious matter and does not self-recover. High majority (94.7%) of the patients perceived that everybody was at risk of acquiring eye injury. Majority of the patients (88.9%) answered that farm, factory and manual workers was more susceptible to eye injuries. Almost all (98.4%) patients stated that eye injury was a serious condition, which needs attention. High majority (94.7%) of the patients perceived that eye injury caused pain, suffering and depression and could become severe (97.4%) if not treated in time. Majority (90.5%) of the patients perceived that with proper measures injury could be controlled and complication prevented.

Table 4.9 Number and percentage of responses to questions on risk perceptions of eye injury

Items	Yes n(%)	No n (%)	Don't know n (%)
1. Minor eye injury is not a serious matter, it is most of the time self recovered	75 (39.7)	105 (55.6)	9 (4.8)
2. Everybody is at risk of acquiring eye injury	179 (94.7)	5 (2.6)	5 (2.6)
3. Farm, factory and manual workers are more susceptible to eye injuries	168 (88.9)	17 (9.0)	4 (2.1)
4. Eye injury is a serious condition and one must give attention to it	186 (98.4)	2 (1.1)	1(0.5)
5. Eye injury causes pain, suffering and depression	179 (94.7)	8 (4.2)	2 (1.1)
6. Eye injury can become severe if it is not treated in time	184(97.4)	3 (1.6)	2(1.1)
7. Proper measures if undertaken can control the eye injury	171 (90.5)	8 (4.2)	10 (5.3)
8. Complications of eye injury does not lead to visual loss and blindness	13 (6.9)	168 (88.9)	8 (4.2)
9. Visual disability cause loss of jobs and socio-economic deprivation	187 (98.9)	2 (1.1)	0 (0.0)

4.7 Risk perception of the respondent's regarding eye injury

The mean (SD) risk perception level of respondents was 16.38 (1.86) and the median 16. More than half (51.9%) of the respondents had moderate risk perception, more than one third (37.6%) had high-risk perception, and (10.6%) had low risk perception regarding eye injury.

Table 4.10 Number and percentage of respondent's perception score level

Particular	Number	Percentage
Low (≤ 14)	20	10.6
Moderate (15-17)	98	51.9
High (>17)	71	37.6
Mean = 16.38, SD=1.86, min=6,max=18,		

Part IV

4.8 Source of information about eye hospital facilitating patient to seek treatment

This section includes two statements. Nearly half (48.7%) of the patients were informed by former patient who helped them to seek treatment at the eye hospital, (34.9%) were informed by family members, and (9.5%) by friends. More than half (52.4%) of the patients came to the hospital themselves whereas, (9.5%) of patients were referred by pharmacy shop/private practitioner.

Table 4.11 Number and percentage of respondents source of information/referral status regarding eye injury

Particulars	Number	Percentage
Source of information that helped patients to visit eye hospital.		
Media (TV, Radio)	5	2.6
Former patient	92	48.7
Friend	18	9.5
Family member	66	34.9
Pharmacy/private practitioner	8	4.2
Self arrived to hospital or referred by first eye care providers		
Pharmacy/private practitioner	18	9.5
Self	99	52.4
Former patients	30	15.9
Family members	42	22.2

4.9 Accessibility to the eye hospital

This section includes four statements. About two third (63.0%) patients used bus, while quarter (23.8%) used bicycle/rickshaw to come to the hospital. The mean (SD) distance to the hospital was 111 km and the median 60 km, nearly half (48.9%) patients had to travel 21-160 kilometer to reach the hospital. The mean (SD) traveling time to the hospital was 3.12 hrs and the median 2.0 hrs. More than half (55.6%) patients took 1-5 hours to travel to the hospital. The mean (SD) traveling cost was 211.86NRS and the median 84NRS. About half (49.7%) patients spent 46-200 Nepalese rupees in traveling cost to reach the hospital.

Table 4.12 Number and percentage of respondent's accessibility status

Particulars	Number	Percentage
Mode of transportation to the hospital		
Bus	119	63.0
Bicycle/Rickshaw	45	23.8
Train and Bus	25	13.2
Distance (kilometer)		
≤ 20	51	27.4
21-160	91	48.9
>160	44	23.7
Mean=111, SD=127.48, median = 60, min=1, max=650, q1=20, q3=160		
Traveling time (hour)		
≤ 1	47	25.1
1 –5	104	55.6
>5	36	19.3
Mean = 3.12, SD=3.10, median=2.0, minimum = 1minute, max=17.05, q1=1, q3=5		
Traveling cost (Nepalese rupees, 1\$=75NRS)		
≤ 45	39	25.8
46-200	75	49.7
>200	37	24.5
Mean = 211.86, SD=530.58, median=84, minimum = 5, max=5000, q1=45, q3=200		

Part V

4.10 Clinical examination report of the patients

The visual acuity of the injured eye was 6/6-6/18 (41.8%), 6/18-6/60 (13.2%), 3/60-1/60 (5.8%), 1/60-Finger count FC (33.3%) and No perception of light NPL (5.8%) Majority (98.4%) had one eyeball injury; very few (1.6%) had eyelid injury. Half (50.3%) of the patients were injured by persons, plants, animals, less than quarter (20.6%) were injured by tools, instruments, equipments and less than quarter (19.6%) were injured by other sources (ball, bat, hockey stick). Majority (92.1%) of the patients did not use any safety devices to protect from injury. Clinical examination of the patients was performed to assess the type of eye injury. Majority of the patients (87.3%) had closed globe injury, (11.6%) had open globe injury, and very few (1.1%) had ocular burns.

Table 4.13 Number and percentage of respondent's clinical examination report

Visual acuity	Number	Percentage
6/6-6/18	79	41.8
6/18-6/60	25	13.2
3/60-1/60	11	5.8
1/60-Finger count F.C.	63	33.3
No light perception NPL	11	5.8
Part of the injured eye		
Eyeball (one eye)	186	98.4
Eyelid	3	1.6
Source of injury		
Chemicals and Chemical product (includes wet/dry cement)	2	1.1
Furniture and Fixtures (includes wall/floor/window covering)	5	2.6
Machinery	7	3.7
Persons, Plants, Animals	95	50.3
Tools, Instrument and Equipments	39	20.6
Vehicles	4	2.1
Other sources	37	19.6
Use of safety eye and face protection		
Yes	15	7.9
No	174	92.1

Table 4.14 Number and percentage of respondent's type of eye injury

Type of eye injury	Number	Percentage
Open Globe Injury	22	11.6
Closed Globe Injury	165	87.3
Ocular Burn	2	1.1

Part VI

4.11 Relationship between socio-demographic factors and severity of eye injury

There were eight questions in this section. The following factors had relationship with the severity of eye injury of the patients: age, nationality and occupation (p-value 0.004, 0.001 0.032 respectively). The mean (SD) age of the respondents was 33.52 (16.16) years old and a median were 30 years old. Younger aged was more affected by moderate injury whereas older aged was affected by severe injury. More Nepali had mild to moderate injury whereas Indian had severe injury. Terai caste was more affected by severe injury. More farmers, housewives were affected by severe injuries whereas service holders were affected by mild injury. Other factors sex, caste/ethnicity, marital status, educational status and income level showed no relationship with severity of eye injury (p-value 0.670, 0.427, 0.180, 0.089, 0.335 respectively). Although education showed no relationship there was a decreasing trend of severity with higher level of education.

Table 4.15 Relationship between socio-demographic factors and severity of eye injury

Particulars	Severity of eye injury			Total	Chi-square (df)	P-value
	Mild n (%)	Moderate n (%)	Severe n (%)			
Age (years)						
≤19	11 (24.4)	20 (44.4)	14 (31.1)	45	22.67 (8)	0.004
20-29	21 (44.7)	15 (31.9)	11 (23.4)	47		
30-39	12 (38.7)	9 (29.0)	10 (32.3)	31		
40-49	5 (20.0)	6 (24.0)	14 (56.0)	25		
≥50	8 (19.5)	8 (19.5)	25 (61.0)	41		
Sex					0.802 (2)	0.670
Male	37 (29.6)	41 (32.8)	47 (37.6)	125		
Female	20 (31.3)	17(26.6)	27 (42.2)	64		
Nationality					13.22 (2)	0.001
Nepali	31 (39.2)	29 (36.7)	19 (24.1)	79		
Indian	26 (23.6)	29 (26.4)	55 (50.0)	110		
Caste/ethnicity					8.069 (8)	0.427
Brahman/Chhettri	13 (38.2)	8 (23.5)	13 (38.2)	34		
Indigenous	5 (29.4)	8 (47.1)	4 (23.5)	17		
Dalit	11 (39.3)	5 (17.9)	12 (42.9)	28		
Terai Caste	22 (24.7)	29 (32.6)	38 (42.7)	89		
Muslim	6 (28.6)	8 (38.1)	7(33.3)	21		
Marital status					3.428 (2)	0.180
Unmarried	16 (30.2)	21 (39.6)	16 (30.2)	53		
Married	41 (30.1)	37 (27.2)	58(42.6)	136		
Educational status					10.99 (6)	0.089
Never attended school	22 (27.2)	17 (21.0)	22 (51.9)	81		
Primary (grade 1-5)	15 (34.1)	16 (36.4)	13(29.5)	44		
Secondary (grade 6-10)	11 (28.9)	15 (39.5)	12 (31.6)	38		
Higher education	9 (34.6)	10 (38.5)	7 (26.9)	26		
Occupational status					16.863 (8)	0.032
Farmer	17 (23.9)	18 (25.4)	36 (50.7)	71		
Farm/factory worker	14 (32.6)	15 (34.9)	14 (32.6)	43		
House wives	7 (28.0)	6 (24.0)	12 (48.0)	25		
Service holder	5 (50.0)	3 (30.0)	2 (20.0)	10		
Student	12 (30.0)	16 (40.0)	12 (30.0)	40		
Income level					2.188(2)	0.335
> NRS 1500	8(41.1)	6(35.3)	3(17.6)	17		
NRS 1501-4000	9(31.0)	9(31.0)	37(9.0)	29		
NRS>4000	6(50.0)	5(41.7)	1(8.3)	12		
Not stated income	32(25.8)	37(29.8)	55(44.4)	124		

4.12 Relationship between knowledge level and severity of eye injury

For statistical calculation purpose the knowledge/information section was separated into knowledge part with 17 statements and information part with four questions. The mean (SD) knowledge level of the respondents was 8.07(1.79) and the median 8. There was no statistically significant relationship found between knowledge levels and severity of eye injury (p-value 0.685). The mean (SD) information level of the respondents was 3.58 (0.825) and the median four. No statistically significant association was found between information levels with severity of eye injury (p-value 0.406)

Table 4.16 Relationship between knowledge level and severity of eye injury

Particulars	Severity of eye injury			Total	Chi-square (df)	P-value
	Mild n (%)	Moderate n (%)	Severe n (%)			
Knowledge level					2.278 (4)	0.685
Low (≤ 7)	24 (34.3)	20 (28.6)	26 (37.1)	70		
Moderate (8-9)	19 (24.7)	27 (35.1)	31 (40.3)	77		
High (> 9)	14 (33.3)	11 (26.2)	17 (40.7)	42		

Table 4.17 Relationship between information level and severity of eye injury

Particulars	Severity of eye injury			Total	Chi-square (df)	P-value
	Mild n (%)	Moderate n (%)	Severe n (%)			
Knowledge/information					1.809 (2)	0.406
Low (≤ 3)	11 (25.0)	17 (38.6)	16 (36.4)	44		
High (> 3)	46 (31.7)	41 (28.3)	58 (40.0)	145		

4.13 Relationship between perception level and severity of eye injury

There were nine statements in this section. The mean (SD) perception level of respondents was 16.38 (1.86) and the median 16. There was no statistically significance perception level that was associated with severity of eye injury (p-value 0.350).

Table 4.18 Relationship between perception level and severity of eye injury

Particulars	Severity of eye injury			Total	Chi-square (df)	P-value
	Mild n (%)	Moderate n (%)	Severe n (%)			
Perception level					4.435 (4)	0.350
Low (≤ 14)	8 (40.0)	5 (25.0)	7 (35.0)	20		
Moderate (15-17)	23 (23.5)	33 (33.7)	42 (42.9)	98		
High (> 17)	26 (36.6)	20 (28.2)	25 (35.2)	71		

4.14 Relationship between treatment-seeking behavior and severity of eye injury

There was statistically significance association between treatment-seeking behaviors for the first time with the severity of eye injury (p-value 0.040). More mild, moderate patients arrived directly to the hospital for treatment whereas severe patients visited to other centers before arriving to the hospital for treatment.

Table 4.19 Relationship between treatment-seeking behavior and severity of eye injury

Particulars	Severity of eye injury			Total	Chi-square (df)	P-value
	Mild n (%)	Moderate n (%)	Severe n (%)			
Treatment-seeking for first time					13.186(6)	0.040
Eye hospital	25(33.3)	30(40.0)	20(26.7)	75		
Pharmacy shop	18(34.6)	14(26.9)	20(38.5)	52		
Private clinic	7(18.4)	9(23.7)	22(57.9)	38		
Primary care facility	7(29.2)	5(20.8)	12(50.0)	24		

4.15 Relationship between source of information and severity of eye injury

In this section statistically significant relationship was found between referral of patients to the eye hospital with severity of eye injury (p-value 0.017). More mild, moderate patients arrived to hospital by themselves for treatment whereas severe patients

were referred from other centers to the hospital for treatment. There was marginally significance relationship between sources of information and severity of eye injury with more severe patients receiving information about hospital from former patient.

Table 4.20 Relationship between source of information/referral status and severity of eye injury

Particulars	Severity of eye injury			Total	Chi-square (df)	P-value
	Mild	Moderate	Severe			
	n (%)	n (%)	n (%)			
Source of information					14.323 (8)	0.074
Media (TV, Radio)	1 (20.0)	3(60.0)	1 (20.0)	5		
Former patient	21 (22.8)	29 (31.5)	42 (45.7)	92		
Friend	9 (50.0)	7 (38.9)	2 (11.1)	18		
Family member	24 (36.4)	18 (27.3)	24 (36.4)	66		
Pharmacy/private practitioner	2 (25.0)	1 (12.5)	5 (62.5)	8		
Referral status					15.486 (6)	0.017
Pharmacy/private practitioner	4 (22.2)	3 (16.7)	11 (61.1)	18		
Self	39 (39.4)	31 (31.3)	29 (29.3)	99		
Former patients	3 (10.0)	12 (40.0)	15 (50.0)	30		
Family members	11 (26.2)	12 (28.6)	19 (45.2)	42		

4.16 Relationship between accessibility and severity of eye injury

This section includes four questions. The following factors had relationship with the severity of eye injury: mode of transportation, traveling distance and traveling cost (p-value 0.003, 0.005, 0.050 respectively). More severe patients used bus/train whereas mild patients came by bicycle/rickshaw. Mild patients had to travel lesser distance, pay less traveling cost whereas moderate and severe patients had to travel longer distance and had to pay more traveling cost. One factor traveling time showed no relationship with severity of eye injury of the patients (p-value 0.581).

Table 4.21 Relationship between accessibility factors and severity of eye injury

Particulars	Severity of eye injury			Total	Chi-square (df)	P-value
	Mild n (%)	Moderate n (%)	Severe n (%)			
Mode of transportation					16.174 (4)	0.003
Bus	35 (29.4)	36 (30.3)	48 (40.3)	119		
Bicycle/Rickshaw	19 (42.2)	17 (37.8)	9 (20.0)	45		
Train and Bus	3 (12.0)	5 (20.0)	17 (68.0)	25		
Distance (kilometer)					14.711 (4)	0.005
≤ 20	23 (45.1)	19 (37.3)	9 (17.6)	51		
21-160	22 (24.2)	25 (27.5)	44 (48.4)	91		
>160	11(25.0)	13 (29.5)	20 (45.5)	44		
Traveling time (hour)					2.864 (4)	0.581
≤ 1	15 (31.9)	17 (36.2)	15 (31.9)	47		
1 –5	33 (31.7)	29 (27.9)	42 (40.4)	104		
>5	8 (22.2)	11 (30.6)	17 (42.2)	36		
Traveling cost (NRS)					9.180 (4)	0.050
≤ 45	17 (43.6)	11 (28.2)	11 (28.2)	39		
46-200	17 (22.7)	19 (25.3)	39 (52.0)	75		
>200	7 (18.9)	12 (32.4)	18 (48.6)	37		

Part VII

4.17 Relationship between socio-demographic factors and time interval to seek treatment

There were eight questions in this section. The following factors had relationship with the time interval for treatment seeking after injury at eye hospital: sex, caste/ethnicity (p-value 0.045, 0.047 respectively). More male patients arrived to hospital in one day whereas female patients arrived after one day. More brahmin/chhetri arrived to hospital within one day whereas terai caste arrived after one day. Other factors age, nationality, marital status, educational status, occupational status and income level showed no relationship with time interval for treatment seeking (p-value 0.936, 0.151, 0.727, 0.135, 0.422, 0.335 respectively).

Table 4.22 Relationship between socio-demographic factors and time interval to seek treatment (days)

Particulars	Time interval (day)		Total	Chi square (df)	P-value
	<-1 day n (%)	>1 day n (%)			
Age (years)				0.821 (4)	0.936
≤19	25 (55.6)	20 (44.4)	45		
20-29	24 (51.1)	23 (48.9)	47		
30-39	15 (48.4)	16 (51.6)	31		
40-49	13 (52.0)	12 (48.0)	25		
≥50	19 (46.3)	22 (53.7)	41		
Sex				4.003 (1)	0.045
Male	70 (56.0)	55 (44.0)	125		
Female	26 (40.6)	38 (59.4)	64		
Nationality				2.066(1)	0.151
Nepali	45 (57.0)	34 (43.0)	79		
Indian	51 (46.4)	59 (53.6)	110		
Caste/ethnicity				9.632(4)	0.047
Brahman/Chhettri	19(55.9)	15 (44.1)	34		
Indigenous	14 (82.4)	3 (17.6)	17		
Dalit	15 (53.6)	13 (46.4)	28		
Terai Caste	38 (42.7)	51 (57.3)	89		
Muslim	10 (47.6)	11 (52.4)	21		
Marital status				0.122 (1)	0.727
Unmarried	28 (52.8)	25 (47.2)	53		
Married	68 (50.0)	68 (50.0)	136		
Educational status				5.555 (3)	0.135
Never attended school	35 (43.2)	46 (56.8)	81		
Primary (grade 1-5)	21 (47.7)	23 (52.3)	44		
Secondary (grade 6-10)	24 (63.2)	14 (36.8)	38		
Higher education	16 (61.5)	10 (38.5)	26		
Occupational status				3.887 (4)	0.422
Farmer	33 (46.5)	38 (53.5)	71		
Farm/factory worker	24 (55.8)	19 (44.2)	43		
House wives	10 (40.0)	15 (60.0)	25		
Service holder	7 (70.0)	3 (30.0)	10		
Student	22 (55.0)	18 (45.0)	40		
Income level				2.188(2)	0.335
> NRS 1500	12(70.6)	5(29.4)	17		
NRS 1501-4000	14(48.3)	15(51.7)	29		
NRS>4000	7(58.3)	5(41.7)	12		
Not stated income	59(47.6)	65(57.4)	124		

4.18 Relationship between knowledge level and time interval to seek treatment

For statistical calculation purpose the knowledge/information section was separated into knowledge part with 17 statements and information part with four questions. The mean (SD) knowledge level of the respondents was 8.07(1.79) and the median 8. There was statistically significance knowledge level that was associated with time interval for treatment seeking after injury (p-value 0.005). The mean (SD) information level of the respondents was 3.58 (0.825) and the median four. There was no statistically significant information level that was related with time interval for treatment seeking (p-value 0.823).

Table 4.23 Relationship between knowledge level and time interval to seek treatment (days)

Particulars	Time interval to seek treatment (day)		Total	Chi square (df)	P-value
	<-1 day n (%)	>1-day n (%)			
Knowledge level				10.406 (2)	0.005
Low (≤ 7)	29 (41.4)	41 (58.6)	70		
Moderate (8-9)	50 (64.9)	27 (35.9)	77		
High (>9)	17 (40.5)	25 (59.5)	42		

Table 4.24 Relationship between information level and time interval to seek treatment (days)

Particulars	Time interval to seek treatment (day)		Total	Chi square (df)	P-value
	≤ 1 day n (%)	>1-day n (%)			
Knowledge/information level				0.50 (1)	0.823
Low (≤ 3)	23 (52.3)	21 (47.7)	44		
High (>3)	74 (50.3)	72 (49.7)	145		

4.19 Relationship between perception level and time interval to seek treatment

The mean (SD) perception level of respondents was 16.38 (1.86) and the median 16. There was no statistically significance perception level that was related with time interval for treatment seeking after injury (p-value 0.668).

Table 4.25 Relationship between perception level and time interval to seek treatment (days)

Particulars	Time interval (day)		Total	Chi square (df)	P-value
	≤ day n (%)	>1-day n (%)			
Perception level				0.806 (2)	0.668
Low (≤ 14)	10 (50.0)	10 (50.0)	20		
Moderate (15-17)	47 (48.0)	51 (52.0)	98		
High (>17)	39 (54.9)	32 (45.1)	71		

4.20 Relationship between treatment-seeking behavior and time interval to seek treatment

There was no statistically significant association between treatment-seeking behavior for the first time and time interval for treatment seeking (p-value 0.782).

Table 4.26 Relationship between treatment-seeking behavior and time interval to seek treatment (days)

Particulars	Time interval to seek treatment (day)		Total	Chi square (df)	P-value
	≤ 1 day n (%)	>1 day n (%)			
Treatment seeking for first time				1.079(3)	0.782
Eye hospital	38 (50.7)	37 (49.3)	75		
Pharmacy shop	29 (55.8)	23 (44.2)	52		
Private clinic	17 (44.7)	21 (55.3)	38		
Primary care facility	12 (50)	12(50.0)	24		

4.21 Relationship between source of information/referral status and time interval to seek treatment

In this section no statistically significant relationship was found between sources of information/referral status with time interval for treatment seeking (p-value 0.525, 0.965 respectively).

Table 4.27 Relationship between source of information/referral and time interval to seek treatment (days)

Particulars	Time interval to seek treatment (day)		Total	Chi-square (df)	P-value
	≤ 1 day n (%)	>1-day n (%)			
Source of information				3.199 (4)	0.525
Media (TV, Radio)	3 (60.0)	2 (40.0)	5		
Former patient	46 (50.0)	46 (50.0)	92		
Friend	12 (66.7)	6 (33.3)	18		
Family member	30 (45.5)	36 (54.5)	66		
Pharmacy/private practitioner	5 (62.5)	3 (37.5)	8		
Referral status				0.272 (3)	0.965
Pharmacy/private practitioner	9(50.0)	9 (50.0)	18		
Self	51 (51.5)	48 (48.5)	99		
Former patients	16 (53 .3)	14 (46.7)	30		
Family members	20 (47.6)	22 (52.4)	42		

4.22 Relationship between accessibility and time interval to seek treatment

This section includes four questions. The following factors had no relationship with the time interval for treatment seeking after injury: mode of transportation, traveling distance, traveling time and traveling cost (p-value 0.745, 0.951, 0.461, 0.733 respectively).

Table 4.28 Relationship between accessibility and time interval to seek treatment

Particulars	Time interval (day)		Total	Chi square (df)	P-value
	≤ 1 day n (%)	>1-day n (%)			
Mode of transportation				0.588(2)	0.745
Bus	61(51.3)	58(48.7)	119		
Bicycle/Rickshaw	24(54.3)	21(46.7)	45		
Train and Bus	11(44.0)	14(56.0)	25		
Distance (kilometer)				0.101(2)	0.951
≤ 20	27(52.9)	24(47.1)	51		
21-160	46(50.5)	45(49.5)	91		
>160	22(50.0)	22(50.0)	44		
Traveling time (hour)				1.550(2)	0.461
≤ 1	22(46.8)	25(53.2)	47		
1 –5	57(54.8)	47(46.2)	104		
>5	16(44.4)	20(55.6)	36		
Traveling cost (NRS)				0.662(2)	0.733
≤ 45	22(56.4)	17(43.6)	39		
46-200	37(49.3)	38(50.7)	75		
>200	18(48.6)	19(51.4)	37		

4.23 Relationship between time intervals of treatment seeking with severity of eye injury

There was marginally significance relationship between time intervals for treatment seeking after injury with severity of eye injury (p-value 0.075). More mild, moderate patients arrived to the hospital for treatment in one day whereas severe patients arrived after one day.

Table 4.29 Relationship between treatments seeking time interval with severity of eye injury

Particulars	Time interval to seek treatment (day)		Total	Chi square (df)	P-value
	≤ 1 day n (%)	>1-day n (%)			
Severity of eye injury				5.186	0.075
Mild	32(56.1)	25(43.9)	57		
Moderate	34(58.6)	24(41.4)	58		
Severe	30(40.6)	44(59.4)	74		