

14 PATIENTS, SIBSHIPS AND PEDIGREES

14.1 Patients Source and Status

The study population included pupils in the blind schools, trainees in workshops, those on waiting lists of the above centres and incumbents of the residential homes. This is together with their affected relatives and cases selected from SJOH register who fulfilled the criteria of the study. Table 14-1 shows a breakdown of the source and status of the cases by region.

	Status	M	F	Total	M/F	Age Range
West Bank	Pupils	69	60	129	1.1	3 – 19.5 (13)*
	Workshops	1	8	9	0.1	12 - 40 (2407)
	Residents	13	32	45	0.4	2.4 – 60 (27)
	Outpatients	61	52	113	1.2	0.6 – 46 (11)
	Relatives	26	21	47	1.25	1 – 60 (20)
Gaza Strip	Pupils	49	33	82	1.5	4.5 - 20 (12)
	Workshops	5	9	14	0.5	20 - 27 (23)
	Residents	3	5	8	0.6	2.6 - 83 (5)
	Outpatients	44	20	64	2	0.7 - 57 (5)
	Relatives	63	33	96	2	0.6 - 83 (20)
Total **	Pupils	119	93	215	1.3	3 – 20 (12.6)
	Workshops	6	17	25	0.3	12 – 40 (24.5)
	Residents	7	41	48	0.2	2.4 - 83 (27)
	Outpatients	122	80	202	1.5	0.6 - 57 (22)
	Relatives	89	134	223	0.6	0.6 – 83 (12)

* Figures in bracket are the mean. ** Include 33 cases whose families live in either regions or Israel

Table 14-1: Cases by status and region

Forty cases of the 709 registered in the study did not fulfil the criteria of childhood onset bilateral visual impairment and were excluded, thus leaving 669 patients for inclusion in the analysis (Table 14-1).

14.2 Regional Distribution

Of the 669 cases who fulfilled the study criteria, 347 originated from the WB and 289 from GS. There are an additional 23 patients who come from either region but their exact location was not possible to ascertain and a further 8 patients had their families living in Israel (Figure 14-1). The WB/GS ratio is 1.2:1.

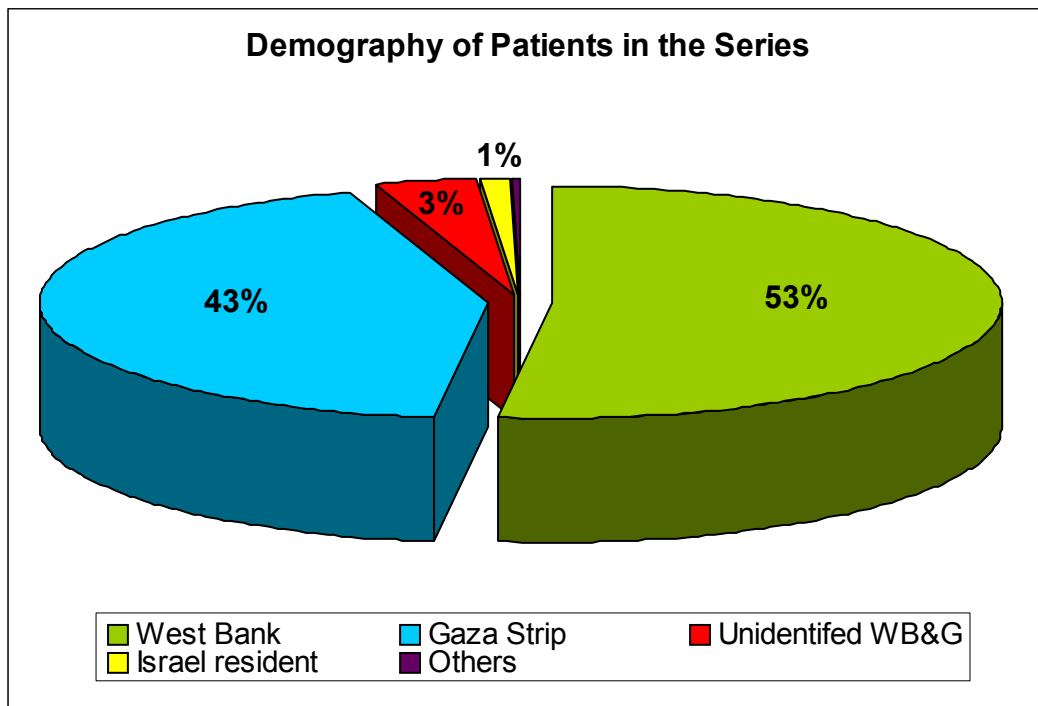


Figure 14-1: Demography of the 669 patients in the study

14.3 Age Composition

Children aged <16 at the date of the completion of the survey formed 62% of the total number in the WB 58% and 57% in the GS. Table 14-2 gives an account on age groups in line with the published population statistics. Figure 14-2 demonstrates the correlation between the survey population and the corresponding cohorts in the general population in 5

yearly intervals and Figure 14-2 demonstrate this correlation graphically. In analysing the data, ages of patients are as 7 September 1987 except when referred to individually.

Correlation of the Survey Population with the corresponding cohorts in the General Population									
Age Cohorts	West Bank			Gaza Strip			Total *		
	No.	%	% Pop	No.	%	% Pop	No.	%	% Pop
< 6	63	18.2	16	56	19.4	18	132	19.7	16
6 to 10	72	20.7	13	59	20.4	15	139	20.8	14
11 to 15	79	22.8	11	49	17	11	134	20	11
16 to 20	64	18.4	12	46	16	9.7	112	16.7	11
21 to 25	22	6.3	8.7	30	10.4	8.8	53	8	8.8
26 to 30	18	5.2	5	12	4.2	7.4	33	5	5.8
31 to 35	4	1.2	3.6	7	2.4	5	11	1.6	4
36 to 40	8	2.3	3.4	7	2.4	3	15	2.2	3.2
41 to 45	6	1.7	3.2	10	3.5	2.4	16	2.4	3
46 to 50	1	0.3	3.1	6	2.1	2.2	7	1	2.8
51 to 55	5	1.4	2.7	-	-	2.3	5	0.7	2.6
56 to 60	1	0.3	2	1	0.3	2.1	2	0.3	2
61 to 65	1	0.3	1.4	2	0.7	1.4	3	0.4	1.4
66+	3	1	3.5	4	1.4	2.5	7	1	3
Total	347	100	100	289	100	100	669	100	100
Grouped Cohorts									
<16	214	61.7	42	164	56.7	46	405	60.5	43
<18	247	71.2	-	184	63.7	-	458	68.4	-
<20 All	278	62.0	52	210	53.3	53	517	57.5	52
16+	133	38.3	48	125	43.3	47	264	39.5	48

* Total includes unidentified cases from either region.

% Pop = % in general Population. Cases from age groups as at the end of the study.

Table 14–2: Numbers and percentages of patients by age and region

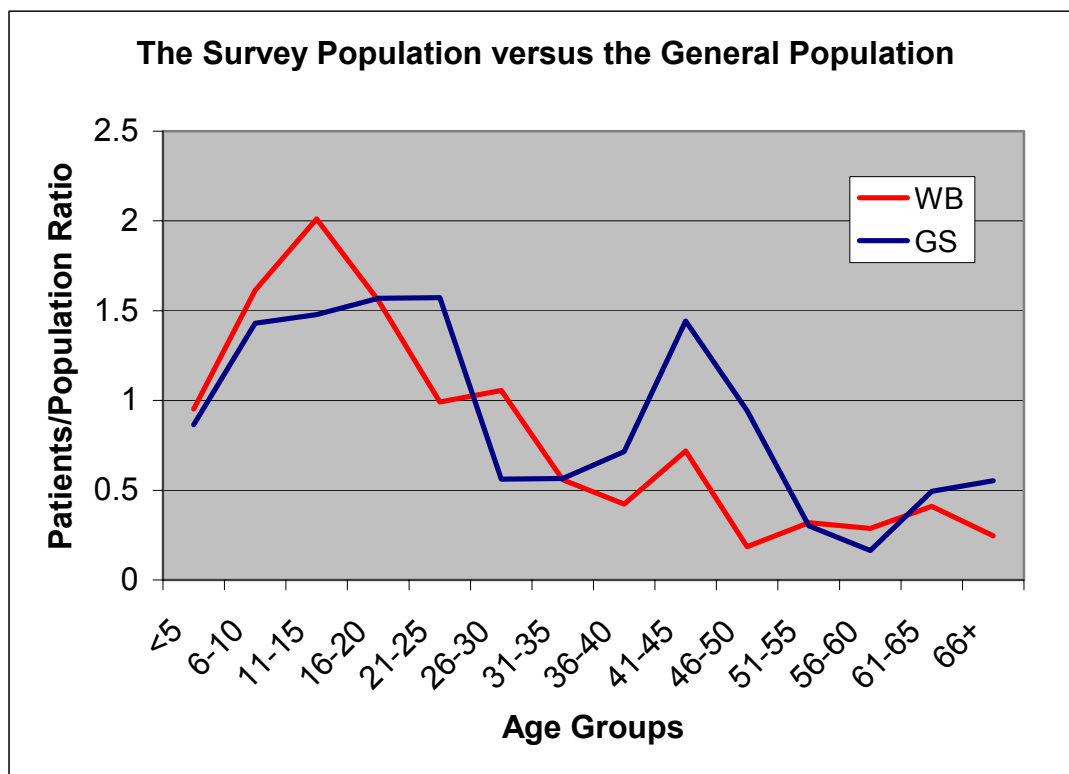


Figure 14-2: Graphic representation of the correlation between the survey populations with the general population in 5 yearly age-cohorts

14.4 Gender (Tables 14-2 and 14-3)

14.4.1 Gender in the Total Series

There was a preponderance of males in the total series with 396 males (55%) and 275 females (45%), a M/F ratio of 1.44:1.

14.4.2 Gender in the West Bank

There are an almost equal proportion of both genders in the WB with 172 males (49.5%) and 175 females (50.5%) giving a sex ratio of 0.98:1, almost identical to that of the general population.

14.4.2 Gender in the Gaza Strip

There are 176 males and 114 females giving a M/F ratio of 1.54:1. This disparity is expressed in all age cohorts but it peaks in the <5 and 16-20 years. In pupils (school age), the gap diminishes reaching near normal pop-

ulation ratio and ranging between 1:1 to 1.2:1 depending on the criteria used in extracting the Age data, that is whether the age range is taken using the age at examination or at the end of the study.

14.4.4 Gender According to Aetiology

There is a high preponderance of male in the non-hereditary cases as it is subgroup in both the WB and GS with a sex ratio of 1.8:1 and 1.5:1 respectively (Table 22-20). Breakdown of the ratios in hereditary and non-hereditary conditions are found in Table 17-2.

14.4.5 Gender According to Age Cohorts (refer to section 22.4.1)

These are the cases recruited from the schools and training centres' waiting list, the mainly adults patients in the workshops, the outpatient cohort and relatives of all above. These cases are from 2 centres, the UNRWA Training Centre for the Blind based at the blind school and the Nablus workshop also based at the school for the blind.

Age	West Bank				Gaza Strip				Total			
	M	F	M/F	Pop.	M	F	M/F	Pop	M	F	M/F	Pop
<5 ^a	27	23	1.2	1.1	31	14	2.2	1.1	68	41	1.6	1.1
5-15	80	70	1.1	1.1	59	50	1.2	1.1	147	127	1.6	1.1
6-18	129	118	1.1	-	113	71	1.6	-	260	198	1.3	-
<16	113	101	1.1	1.1	97	67	1.4	1.1	228	177	1.3	1.1
16-20 ^a	28	26	1.1	1.1	26	8	3.2	1.1	54	35	1.5	1.1
16+	57	76	0.7	0.8	79	46	1.7	0.8	139	125	1.1	0.8
21+ ^b	27	42	0.6	0.95	48	31	1.5	0.9	78	74	1	0.9
Total	170	177	1	0.88	176	113	1.6	1	367	302	1.2	0.9

Numbers and ages are as at the end of the study. Pop. = M/F population ratio.

^a Population figures are for the < 4 and 15-19 years cohorts but it can be applied to the age group as the ratio of 1.1:1 is consistent in all the < 24 years old population.

^b Population ratios are those of the 21+ years old population.

Table 14-3: M/F ratios by age cohort and region

14.5 Pedigrees and Sibships (Table 14-4)

The total number of pedigrees in the series was 391, comprising 459 sibships. Nearly two thirds (58%, n=229) of the pedigrees were from the WB and one third (34%, n=131) in the GS. There were 24 whose residence was not determined clearly, whether in the WB or the GS, together with 8 pedigrees who lived outside the WB. The percentage of sibships was higher in the WB, forming 56% (n= 257) in comparison to 37% in the GS (n=171) of the total sibships.

The ratio of pedigrees between the WB/GS is almost identical to that of the population between the two regions at 1.75:1. When the same ratio is applied to sibships and pedigrees, it drops to 1.5:1 for sibships and 1.2:1 for patients, reflecting the larger numbers of sibships and consequently of patients in the GS.

Figure 14-3 demonstrates this graphically but for the purpose of a better visual impact the ratio was reversed using GS/WB ratio outcome (rather than WB/GS ratio). In this figure the first column on the left represents the ratio of GS/WB population, which is 0.56:1. Ratios of pedigrees, sibships and patients are shown in the subsequent columns.

Region	Pedigrees		Sibships		Patients	
West Bank	229	58	257	56	347	52
Gaza Strip	131	33	170	37	289	43
Unidentified	22	6	24	5	23	3.4
Israel	8	2	8	2	9	1.3
Total	391	100	459	100	669	100
WB/GS	1.75		1.5		1.2	

Percentages in bold

Table 14-4: Patients, sibships and pedigrees by region

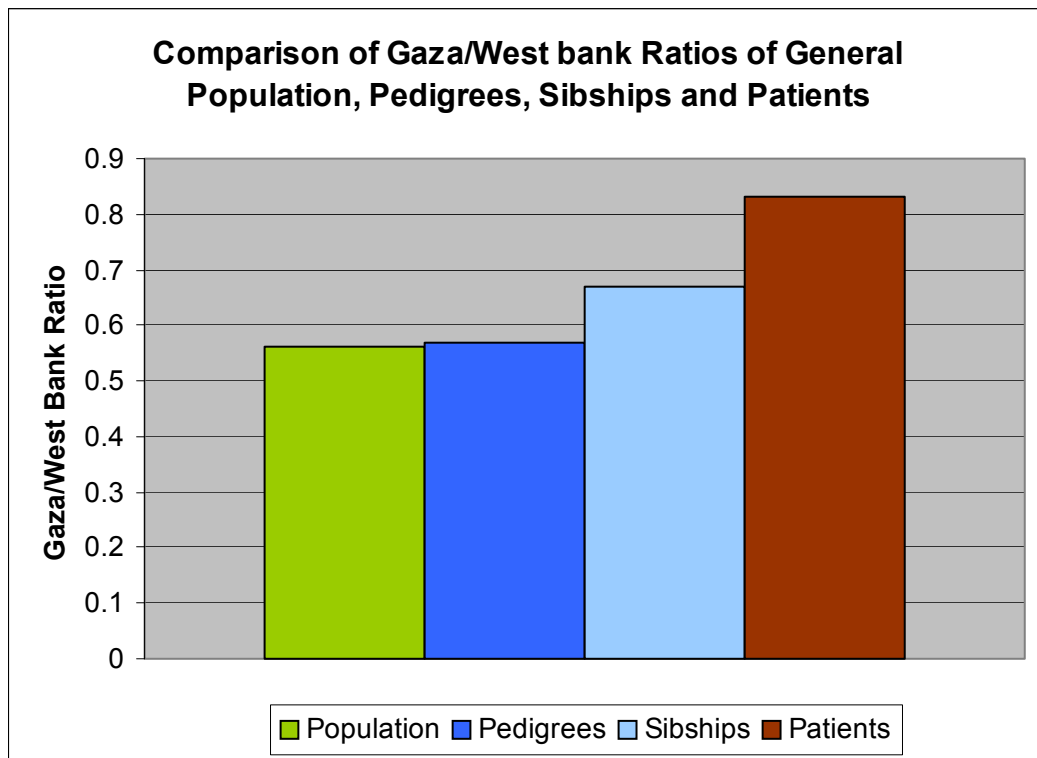


Figure 14-3: Graphical demonstration of GS/WB ratios of patients and families

14.5 Patients by Aetiology and Type of Residence

Table 14-5 lists the proportion of patients and aetiological groups by the type of the residence.

	Hereditary		Non-Hereditary		Undetermined		Total	
Villagers	223	43	38	42	8	13	269	40
Town	174	34	29	32	20	33	223	33
Camp	90	17	17	19	4	7	111	17
N/A	32	6	6	7	28	47	66	10
Total	519	100	90	100	60	100	669	100

Percentages in bold N/A: Type of residence not known

Figure 14-5: Graphical demonstration of GS/WB ratios of patients and families

14.6 Patients by Religion

Muslims by birth formed the vast majority of cases (658, 98.2%). Christians at the time of examination was 12. Three of whom had been converted at the residential hall. The 9 cases who were born as Christians had an age distribution of 4 in the <16 and 5 in the 16+ cohort. Hereditary cases in this group were found in 4 and non-hereditary factors in 5. Among the latter, 3 patients had blindness secondary to CNS pathology.