CHAPTER FOUR

FINDINGS

This chapter presents the findings of the study. The findings obtained for each of the key variables that were investigated are presented separately.

4.1 The Impact of Loss of Parents on Behaviour Problems

As noted above (see chapter one), this section of the study was based on the assumption that there would be significant differences in the nature of behaviour problems between children who had lost one or both parents and those with both parents alive, as measured by the CBCL. The following findings are based on 400 rural and 395 urban grade 5 pupils. Their caregivers and teacher(s) were also asked to complete the CBCL for the specific pupils. Firstly, reliability was computed to establish if all the scales of the CBCL were consistently completed across the three categories of informants. Table 4.1 below reveals high alpha reliabilities for each of the scales as completed by each of the informants, indicating consistency in the manner in which the CBCL items were perceived and scored by the respondents. The reliability figures are in line with international standards for the CBCL scales.

Table 4.1: Alpha reliabilities of the CBCL internalizing, externalizing and total problems scales

	CBCL	Alpha	Number of Items	N
Teacher	Internalizing	.84	32	795
	Externalizing	.88	33	795
	Total Problems	.94	114	795
Caregiver	Internalizing	.87	32	789
	Externalizing	.85	33	789
	Total Problems	.96	114	789
Youth	Internalizing	.83	32	795
	Externalizing	.86	33	795
	Total Problems	.95	114	795

4.1.1 Descriptives of the CBCL by Gender

In Table 2, the means and standard deviations, as well as the 95% confidence intervals for each gender separately have been presented. Only the teachers reported significant differences between boys and girls. Surprisingly, they observed more internalizing, externalizing, and total problem behaviours in girls than in boys (see Tables 4.2 and 4.2a). Caregivers and youth did not report such differences.

Table 4.2: Means and standard deviations for CBCL scales, for boys and girls separately

Informant	CBCL problems	Gender	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound
Teacher	cbcl	Boy	395	3.8380	4.27946	.21532	3.4146	4.2613
	internalizing	Girl	400	5.3625	4.69374	.23469	4.9011	5.8239
	problems	Total	795	4.6050	4.55418	.16152	4.2880	4.9221
	cbcl	Boy	395	4.1418	4.68393	.23567	3.6784	4.6051
	externalizing	Girl	400	5.7725	7.20350	.36018	5.0644	6.4806
	problems	Total	795	4.9623	6.13419	.21756	4.5352	5.3893
	cbcl total	Boy	395	14.2203	13.56652	.68261	12.8782	15.5623
	problems	Girl	400	19.2400	16.79173	.83959	17.5894	20.8906
		Total	795	16.7459	15.47024	.54867	15.6689	17.8229
Caregiver	cbcl	Boy	395	9.4987	8.44071	.42470	8.6638	10.3337
	internalizing	Girl	400	9.5275	8.72379	.43619	8.6700	10.3850
	problems	Total	795	9.5132	8.57891	.30426	8.9160	10.1105
	cbcl	Boy	395	8.7924	7.79447	.39218	8.0214	9.5634
	externalizing	Girl	400	8.1700	7.61486	.38074	7.4215	8.9185
	problems	Total	795	8.4792	7.70606	.27331	7.9428	9.0157
	cbcl total	Boy	393	31.7888	28.03166	1.4140	29.0088	34.5688
	problems	Girl	396	30.4747	28.46445	1.4303	27.6626	33.2869
		Total	789	31.1293	28.23943	1.0053	29.1558	33.1028
Youth	cbcl	Boy	395	21.7924	9.82886	.49454	20.8201	22.7647
	internalizing	Girl	400	21.4575	10.00016	.50001	20.4745	22.4405
	problems	Total	795	21.6239	9.91059	.35149	20.9339	22.3139
	cbcl	Boy	395	21.1595	10.96429	.55167	20.0749	22.2441
	externalizing	Girl	400	20.7550	11.16138	.55807	19.6579	21.8521
	problems	Total	795	20.9560	11.05878	.39221	20.1861	21.7259
	cbcl total	Boy	393	83.0458	34.77373	1.7541	79.5972	86.4944
	problems	Girl	397	82.1587	35.28166	1.7707	78.6775	85.6399
		Total	790	82.6000	35.01051	1.2456	80.1549	85.0451

Table 4.2a: Statistics for the ANOVA's on gender and CBCL

Informant	CBCL problems	ANOVA	Df	F	Sig.
Teacher	cbcl	Between groups	1	22.885	.000
	internalizing	Within groups	793		
	problems	Total	794		
	cbcl	Between groups	1	14.280	.000
	externalizing	Within groups	793		
	problems	Total	794		
	cbcl total	Between groups	1	21.464	.000
	problems	Within groups	793		
		Total	794		
Caregiver	cbcl	Between groups	1	.002	.962
	internalizing	Within groups	793		
	problems	Total	794		
	cbcl	Between groups	1	1.297	.255
	externalizing	Within groups	793		
	problems	Total	794		
	cbcl total	Between groups	1	.427	.514
	problems	Within groups	787		
		Total	788		
Youth	cbcl	Between groups	1	.227	.634
	internalizing	Within groups	793		
	problems	Total	794		
	cbcl	Between groups	1	.266	.606
	externalizing	Within groups	793		
	problems	Total	794		
	cbcl total	Between groups	1	.127	.722
	problems	Within groups	788		
		Total	789		

4.1.2 Differences Between Teacher, Caregiver, and Youth CBCL Scores

From Table 4.3, it is already clear that teachers, caregivers and youth differ in the average number of behaviour problems they report. In fact, teachers appear to report fewer problems than caregivers, while caregivers appear to report fewer problems than the children themselves. Children report a surprisingly large number of problems of internalizing as well as externalizing nature, compared to teachers and caregivers, and also compared to findings in other countries on the basis of the CBCL youth self-report. A possible explanation for this discrepancy could be the fact that pupils, unlike their teachers and parents, are likely to be more open about how they feel. Parents may be subjective and conscious of

other people's reactions about their (parents') values. As for teachers, they may not really know their children individually because of large class sizes and frequent transfers.

In Table 4.3, paired t-tests for these differences are presented. From this table, it can be derived that indeed all comparisons are significant, $p <$ .01.

Table 4.3: Paired t-tests for the differences between the teacher, parent, and youth report on internalizing, externalizing, and total behaviour problems

Paired t-tests		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig.
					Lower	Upper			
Pair 1	cbcl externalizing problems teacher - cbcl externalizing problems caregiver	-3.5170	10.37645	.36801	-4.2394	-2.7946	-9.557	794	.000
	cbcl externalizing problems teacher - cbcl externalizing problems youth	-15.9937	13.16448	.46690	-16.9102	-15.0772	-34.255	794	.000
	cbcl externalizing problems caregiver - cbcl externalizing problems youth	-12.4767	11.91988	.42275	-13.3066	-11.6469	-29.513	794	.000
	cbcl internalizing problems teacher - cbcl internalizing problems caregiver	-4.9082	9.86906	.35002	-5.5952	-4.2211	-14.023	794	.000
	cbcl internalizing problems youth - cbcl internalizing problems caregiver	12.1107	12.45406	.44170	11.2437	12.9777	27.418	794	.000
	cbcl internalizing problems teacher - cbcl internalizing problems youth	-17.0189	10.62675	.37689	-17.7587	-16.2790	-45.156	794	.000
	cbcl total problems teacher - cbcl total problems caregiver	-14.4423	33.77093	1.20228	-16.8024	-12.0823	-12.012	788	.000
	cbcl total problems teacher - cbcl total problems youth	-65.8722	38.90693	1.38425	-68.5894	-63.1549	-47.587	789	.000
	cbcl total problems youth - cbcl total problems caregiver	51.4298	40.89325	1.46047	48.5629	54.2968	35.215	783	.000

As usual in studies with multiple informants, the CBCL scores reported by teachers, caregivers, and youth are only weakly associated (see Table 4.4). Thus, not only do teachers, caregivers and youth report different numbers of behaviour problems, but they also rank children differently in terms of these problems. They seem to perceive the same child differently, maybe because they experience their behaviour in different contexts.

Table 4.4: Correlations between CBCL scales for teachers, caregivers, and children

CBCL problems	**Correlations**	1	2	3	4	5	6	7	8	9
1. internalizing problems teacher	Pearson Correlation	1								
	Sig. (2-tailed)	.								
2. internalizing problems parent	Pearson Correlation	-.039	1							
	Sig. (2-tailed)	.270	.							
3.internalizing problems youth	Pearson Correlation	.067	.098	1						
	Sig. (2-tailed)	.060	.006	.						
4.externalizing problems teacher	Pearson Correlation	.374	-.121	-.028	1					
	Sig. (2-tailed)	.000	.001	.432	.					
5.externalizing problems parent	Pearson Correlation	-.056	.871	.084	-.113	1				
	Sig. (2-tailed)	.115	.000	.018	.001	.				
6.externalizing problems youth	Pearson Correlation	-.027	.270	.794	-.099	.232	1			
	Sig. (2-tailed)	.440	.000	.000	.005	.000	.			
7.total problems teacher	Pearson Correlation	.755	-.119	.006	.834	-.113	-.095	1		
	Sig. (2-tailed)	.000	.001	.876	.000	.001	.007	.		
8.total problems parent	Pearson Correlation	-.051	.939	.096	-.118	.954	.267	-.120	1	
	Sig. (2-tailed)	.150	.000	.007	.001	.000	.000	.001	.	
9.total problems youth	Pearson Correlation	.019	.188	.909	-.068	.152	.941	-.045	.181	1
	Sig. (2-tailed)	.589	.000	.000	.055	.000	.000	.206	.000	.
Total	N	790	790	790	790	790	790	790	784	790

4.1.3 CBCL, Age, Language Competence, and Teacher Ratings of Pupils' General Intelligence

The teachers report more problem behaviour in older pupils, and in pupils with lower teacher ratings of pupils' general intelligence (see Table 4.5). The caregivers, however, tend to report more problems in children who are somewhat younger, and who score lower on the language test. The youth reported problems, however, are not related to teacher ratings of pupils' general intelligence or to age, which underline the validity of this self-report. However, their language competence is associated with self-reported problems, in that pupils with better language competence report fewer behaviour problems (see Table 4.5).

Table 4.5: Correlations between CBCL scales, and Age, Language competence, and Teacher ratings of pupils' general

Informant	CBCL problems	Correlations	Age of pupil	language	Teacher ratings of pupils' general intelligence
Teacher	cbcl internalizing problems	Pearson Correlation	.137	.025	-.186
		Sig. (2-tailed)	.000	.484	.000
		N	795	795	786
	cbcl externalizing problems	Pearson Correlation	.105	.090	-.168
		Sig. (2-tailed)	.003	.011	.000
		N	795	795	786
	cbcl total problems	Pearson Correlation	.167	.065	-.273
		Sig. (2-tailed)	.000	.068	.000
		N	795	795	786
Caregiver	cbcl internalizing problems	Pearson Correlation	-.078	-.192	-.051
		Sig. (2-tailed)	.028	.000	.152
		N	795	795	786
	cbcl externalizing problems	Pearson Correlation	-.096	-.167	-.060
		Sig. (2-tailed)	.007	.000	.094
		N	795	795	786
	cbcl total problems	Pearson Correlation	-.099	-.185	-.057
		Sig. (2-tailed)	.005	.000	.112
		N	789	789	780
Youth	cbcl internalizing problems	Pearson Correlation	-.015	-.118	-.033
		Sig. (2-tailed)	.674	.001	.354
		N	795	795	786
	cbcl externalizing problems	Pearson Correlation	-.018	-.179	-.052
		Sig. (2-tailed)	.618	.000	.145
		N	795	795	786
	cbcl total problems	Pearson Correlation	-.006	-.156	-.050
		Sig. (2-tailed)	.866	.000	.160
		N	790	790	781

4.1.4 Urban Versus Rural Reports on Behaviour Problems

The CBCL scores for rural pupils differ significantly from those for the urban pupils on all CBCL scales from each of the three informants. However, the differences go in opposite directions depending on the informant. In fact, the teachers of the rural pupils report fewer behaviour problems than the teachers of the urban pupils, whereas for the caregivers and children this is opposite: rural pupils are reported by their caregivers and by themselves to have more behaviour problems than the urban pupils seem to have (see Tables 4.6 and 4.6a). These differences between rural and urban pupils are quite substantial. For example, teachers report almost twice as many externalising problems in urban youth, whereas caregivers report about three times as many externalising problems in rural children. It should be noted, of course, that teachers observe their pupils only during a restricted amount of time, in the restricted context of the classroom.

Table 4.6: Differences between rural and urban pupils on the CBCL scales

Informant	CBCL problems	Location	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound
Teacher	cbcl	Urban	395	5.0278	5.04968	.25408	4.5283	5.5274
	internalizing	Rural	400	4.1875	3.96758	.19838	3.7975	4.5775
	problems	Total	795	4.6050	4.55418	.16152	4.2880	4.9221
	cbcl	Urban	395	6.2835	7.35542	.37009	5.5559	7.0111
	externalizing	Rural	400	3.6575	4.24503	.21225	3.2402	4.0748
	problems	Total	795	4.9623	6.13419	.21756	4.5352	5.3893
	cbcl total	Urban	395	20.0304	17.92650	.90198	18.2571	21.8037
	problems	Rural	400	13.5025	11.73453	.58673	12.3490	14.6560
		Total	795	16.7459	15.47024	.54867	15.6689	17.8229
Caregiver	cbcl	Urban	395	4.2506	3.74104	.18823	3.8806	4.6207
	internalizing	Rural	400	14.7100	8.84004	.44200	13.8411	15.5789
	problems	Total	795	9.5132	8.57891	.30426	8.9160	10.1105
	cbcl	Urban	395	3.8911	2.83663	.14273	3.6105	4.1717
	externalizing	Rural	400	13.0100	8.29499	.41475	12.1946	13.8254
	problems	Total	795	8.4792	7.70606	.27331	7.9428	9.0157
	cbcl total	Urban	389	13.0283	8.72381	.44231	12.1586	13.8979
	problems	Rural	400	48.7325	29.51022	1.47551	45.8318	51.6332
		Total	789	31.1293	28.23943	1.00535	29.1558	33.1028
Youth	cbcl	Urban	395	19.3342	9.19362	.46258	18.4247	20.2436
	internalizing	Rural	400	23.8850	10.08345	.50417	22.8938	24.8762
	problems	Total	795	21.6239	9.91059	.35149	20.9339	22.3139
	cbcl	Urban	395	15.1519	6.29618	.31680	14.5291	15.7747
	externalizing	Rural	400	26.6875	11.74477	.58724	25.5330	27.8420
	problems	Total	795	20.9560	11.05878	.39221	20.1861	21.7259
	cbcl total	Urban	391	68.8593	24.14875	1.22125	66.4583	71.2604
	problems	Rural	399	96.0652	38.61634	1.93324	92.2645	99.8658
		Total	790	82.6000	35.01051	1.24562	80.1549	85.0451

Table 4.6a: Statistics for the differences between rural and urban pupils on the CBCL scales

Informant	CBCL problems	Differences	df	F	Sig.
Teacher	cbcl internalizing problems	Between groups	1	6.816	.009
		Within groups	793		
		Total	794		
	cbcl externalizing problems	Between groups	1	38.126	.000
		Within groups	793		
		Total	794		
	cbcl total problems	Between groups	1	36.991	.000
		Within groups	793		
		Total	794		
Caregiver	cbcl internalizing problems	Between groups	1	469.864	.000
		Within groups	793		
		Total	794		
	cbcl externalizing problems	Between groups	1	427.936	.000
		Within groups	793		
		Total	794		
	cbcl total problems	Between groups	1	524.815	.000
		Within groups	787		
		Total	788		
Youth	cbcl internalizing problems	Between groups	1	44.185	.000
		Within groups	793		
		Total	794		
	cbcl externalizing problems	Between groups	1	296.818	.000
		Within groups	793		
		Total	794		
	cbcl total problems	Between groups	1	140.301	.000
		Within groups	788		
		Total	789		

4.1.5 Behaviour Problems in Children With Or Without Parental Loss

In the present chapter the main question is, whether pupils with or without parental loss differ in the number of behaviour problems, as reported by teachers, caregivers, and youths themselves. For the total sample, the average numbers of problems per parental loss category are presented in Table 4.7. As can be derived from this table, teachers report somewhat fewer internalizing and total problems in pupils with both parents alive, whereas caregivers unexpectedly report more behaviour problems for pupils with both parents alive. The contrasts presented in Table 4.7a confirm this impression statistically.

Table 4.7: Behaviour problems in children with or without loss of parents, as perceived by teachers, caregivers and youth (total sample)

Informant	CBCL problems	Status	N	Mean	Std. Deviation	95% Confidence Interval for Mean Lower Bound	Upper Bound
Teacher	cbcl	Mother dead	200	4.5700	4.03067	4.0080	5.1320
	internalizing	Father dead	82	4.5000	4.57381	3.4950	5.5050
	problems	Both parents dead	164	5.2134	5.40026	4.3807	6.0461
	teacher	Both parents alive	349	4.3639	4.38938	3.9018	4.8260
		Total	795	4.6050	4.55418	4.2880	4.9221
	cbcl	Mother dead	200	5.7250	6.53244	4.8141	6.6359
	externalizing	Father dead	82	4.2073	6.59730	2.7577	5.6569
	problems	Both parents dead	164	5.1646	6.47816	4.1658	6.1635
	teacher	Both parents alive	349	4.6074	5.57221	4.0208	5.1941
		Total	795	4.9623	6.13419	4.5352	5.3893
	cbcl total	Mother dead	200	18.3000	15.23452	16.1757	20.4243
	problems	Father dead	82	14.5732	15.08742	11.2581	17.8882
	teacher	Both parents dead	164	18.9451	18.27407	16.1274	21.7628
		Both parents alive	349	15.3324	14.04114	13.8541	16.8106
		Total	795	16.7459	15.47024	15.6689	17.8229
Care-giver	cbcl	Mother dead	200	9.8200	8.81397	8.5910	11.0490
	internalizing	Father dead	82	8.2683	7.62395	6.5931	9.9435
	problems	Both parents dead	164	8.2927	7.56240	7.1266	9.4587
	caregiver	Both parents alive	349	10.2034	9.03228	9.2525	11.1544
		Total	795	9.5132	8.57891	8.9160	10.1105
	cbcl	Mother dead	200	8.8400	8.20800	7.6955	9.9845
	externalizing	Father dead	82	7.3780	6.49908	5.9500	8.8061
	problems	Both parents dead	164	7.0671	6.73980	6.0278	8.1063
	caregiver	Both parents alive	349	9.1948	8.00265	8.3523	10.0374
		Total	795	8.4792	7.70606	7.9428	9.0157
	cbcl total	Mother dead	197	32.9492	29.25429	28.8387	37.0597
	problems	Father dead	82	26.5366	23.86391	21.2931	31.7801
	parent	Both parents dead	163	25.8037	23.76709	22.1276	29.4798
		Both parents alive	347	33.6830	30.11333	30.5035	36.8625
		Total	789	31.1293	28.23943	29.1558	33.1028
Youth	cbcl	Mother dead	200	22.9150	9.51475	21.5883	24.2417
	internalizing	Father dead	82	19.9146	10.49656	17.6083	22.2210
	problems	Both parents dead	164	21.7927	9.50652	20.3269	23.2585
	youth	Both parents alive	349	21.2063	10.12524	20.1403	22.2723
		Total	795	21.6239	9.91059	20.9339	22.3139
	cbcl	Mother dead	200	21.8100	10.31630	20.3715	23.2485
	externalizing	Father dead	82	21.1098	12.76086	18.3059	23.9136
	problems	Both parents dead	164	21.0671	11.16421	19.3456	22.7885
	youth	Both parents alive	349	20.3782	11.00576	19.2195	21.5369
		Total	795	20.9560	11.05878	20.1861	21.7259
	cbcl total	Mother dead	200	86.3750	32.24910	81.8782	90.8718
	problems	Father dead	82	80.0610	40.09105	71.2520	88.8699
	youth	Both parents dead	164	83.9756	34.70029	78.6251	89.3261
		Both parents alive	344	80.3547	35.33516	76.6074	84.1019
		Total	790	82.6000	35.01051	80.1549	85.0451

Table 4.7a: Statistics for two contrasts (1: both parents alive versus the others; 2: both parents alive versus both parents dead) for behaviour problems in children with or without parental loss (total sample)

Informant	CBCL problems	Variance	Contrast	t	df	Sig. (2-tailed)
Teacher	cbcl internalizing problems	Assume equal variances	1	-1.182	791	.238
			2	-1.972	791	.049
	cbcl externalizing problems	Assume equal variances	1	-.940	791	.348
			2	-.961	791	.337
	cbcl total problems	Assume equal variances	1	-1.706	791	.088
			2	-2.477	791	.013
Caregiver	cbcl internalizing problems	Assume equal variances	1	2.232	791	.026
			2	2.359	791	.019
	cbcl externalizing problems	Assume equal variances	1	2.531	791	.012
			2	2.931	791	.003
	cbcl total problems	Assume equal variances	1	2.526	785	.012
			2	2.955	785	.003
Youth	cbcl internalizing problems	Assume equal variances	1	-.458	791	.647
			2	-.626	791	.531
	cbcl externalizing problems	Assume equal variances	1	-1.164	791	.245
			2	-.658	791	.511
	cbcl total problems	Assume equal variances	1	-1.202	786	.230
			2	-1.091	786	.276

Because a large difference was found for the CBCL scores between the rural and urban pupils, it was inevitable to repeat the last analysis for each sub-group separately. In Tables 4.8 and 4.8a the data for the urban sample are presented. As can be derived from these tables, the differences between the loss categories for the caregiver reported problems found in the total sample do not show up in the urban sample. The urban pupils with both parents alive appear to show fewer internalizing and total behaviour problems, as perceived by their teachers, compared to pupils who lost both parents (contrast 2). This finding was also present in the total sample.

Table 4.8: Behaviour problems in children with or without loss of parents, as perceived by teachers, caregivers and youth (urban sample)

Informant	CBCL problems	N	Mean	Std. Deviation		95% Confidence Interval for Mean Lower Bound	Upper Bound
Teacher	cbcl internalizing problems teacher	Mother dead	100	4.4400	3.84109	3.6778	5.2022
		Father dead	39	5.4103	5.56170	3.6074	7.2132
		Both parents dead	86	6.2209	6.18233	4.8954	7.5464
		Both parents alive	170	4.6824	4.85216	3.9477	5.4170
		Total	395	5.0278	5.04968	4.5283	5.5274
	cbcl externalizing problems teacher	Mother dead	100	7.4000	7.64622	5.8828	8.9172
		Father dead	39	5.3077	8.23393	2.6386	7.9768
		Both parents dead	86	6.2209	7.52314	4.6080	7.8339
		Both parents alive	170	5.8824	6.85939	4.8438	6.9209
		Total	395	6.2835	7.35542	5.5559	7.0111
	cbcl total problems teacher	Mother dead	100	21.3600	17.05163	17.9766	24.7434
		Father dead	39	18.1282	18.89748	12.0024	24.2541
		Both parents dead	86	23.3256	21.16514	18.7878	27.8634
		Both parents alive	170	18.0176	16.18001	15.5679	20.4674
		Total	395	20.0304	17.92650	18.2571	21.8037
Care-giver	cbcl internalizing problems caregiver	Mother dead	100	4.2300	3.88952	3.4582	5.0018
		Father dead	39	3.7179	3.21140	2.6769	4.7590
		Both parents dead	86	4.4535	4.14064	3.5657	5.3412
		Both parents alive	170	4.2824	3.56881	3.7420	4.8227
		Total	395	4.2506	3.74104	3.8806	4.6207
	cbcl externalizing problems caregiver	Mother dead	100	3.6700	2.85351	3.1038	4.2362
		Father dead	39	3.4103	2.13638	2.7177	4.1028
		Both parents dead	86	3.9070	3.06259	3.2504	4.5636
		Both parents alive	170	4.1235	2.84761	3.6924	4.5547
		Total	395	3.8911	2.83663	3.6105	4.1717
	cbcl total problems caregiver	Mother dead	97	13.1959	9.13514	11.3547	15.0370
		Father dead	39	11.3846	6.97973	9.1220	13.6472
		Both parents dead	85	13.1882	10.04454	11.0217	15.3548
		Both parents alive	168	13.2321	8.14316	11.9918	14.4725
		Total	389	13.0283	8.72381	12.1586	13.8979
Youth	cbcl internalizing problems youth	Mother dead	100	20.3400	9.60137	18.4349	22.2451
		Father dead	39	15.9744	8.05078	13.3646	18.5841
		Both parents dead	86	19.9651	8.99470	18.0366	21.8936
		Both parents alive	170	19.1941	9.18469	17.8035	20.5847
		Total	395	19.3342	9.19362	18.4247	20.2436
	cbcl externalizing problems youth	Mother dead	100	15.7300	6.23100	14.4936	16.9664
		Father dead	39	13.8462	6.32263	11.7966	15.8957
		Both parents dead	86	15.1279	6.81658	13.6664	16.5894
		Both parents alive	170	15.1235	6.06006	14.2060	16.0411
		Total	395	15.1519	6.29618	14.5291	15.7747
	cbcl total problems youth	Mother dead	100	71.6900	24.44606	66.8394	76.5406
		Father dead	39	61.0256	23.80014	53.3105	68.7408
		Both parents dead	86	70.9535	26.17988	65.3405	76.5665
		Both parents alive	166	67.9096	22.66564	64.4362	71.3831
		Total	391	68.8593	24.14875	66.4583	71.2604

Table 4.8a: Statistics for two a priori contrasts (1: both parents alive versus the others; 2: both parents alive versus both parents dead) for behaviour problems in children with or without parental loss (urban sample)

Informant	CBCL problems	Variance	Contrast	t	df	Sig. (2-tailed)
Teacher	cbcl internalizing problems	Assume equal variances	1	-1.273	391	.204
			2	-2.315	391	.021
	cbcl externalizing problems	Assume equal variances	1	-.551	391	.582
			2	-.348	391	.728
	cbcl total problems	Assume equal variances	1	-1.550	391	.122
			2	-2.246	391	.025
Caregiver	cbcl internalizing problems	Assume equal variances	1	.375	391	.708
			2	-.345	391	.730
	cbcl externalizing problems	Assume equal variances	1	1.540	391	.124
			2	.577	391	.564
	cbcl total problems	Assume equal variances	1	.693	385	.489
			2	.038	385	.970
Youth	cbcl internalizing problems	Assume equal variances	1	.450	391	.653
			2	-.637	391	.525
	cbcl externalizing problems	Assume equal variances	1	.334	391	.738
			2	-.005	391	.996
	cbcl total problems	Assume equal variances	1	.008	387	.994
			2	-.953	387	.341

In the rural sample, the unexpected larger number of behaviour problems in the children with both parents alive as perceived by the caregivers is found (see Tables 4.9 and 4.9a). The teacher reported problems do not differ between the parental loss groups.

Table 4.9: Behaviour problems in children with or without loss of parents, as perceived by teachers, caregivers and youth (rural sample)

Informant	CBCL problems	Status	N	Mean	Std. Deviation	95% Confidence Interval for Mean Lower Bound	Upper Bound
Teacher	cbcl	Mother dead	100	4.7000	4.22714	3.8612	5.5388
	internalizing	Father dead	43	3.6744	3.30022	2.6588	4.6901
	problems	Both parents dead	78	4.1026	4.14224	3.1686	5.0365
	teacher	Both parents alive	179	4.0615	3.88914	3.4878	4.6351
		Total	400	4.1875	3.96758	3.7975	4.5775
	cbcl	Mother dead	100	4.0500	4.65230	3.1269	4.9731
	externalizing	Father dead	43	3.2093	4.52274	1.8174	4.6012
	problems	Both parents dead	78	4.0000	4.87240	2.9014	5.0986
	teacher	Both parents alive	179	3.3966	3.60620	2.8647	3.9286
		Total	400	3.6575	4.24503	3.2402	4.0748
	cbcl total	Mother dead	100	15.2400	12.52401	12.7550	17.7250
	problems	Father dead	43	11.3488	9.67048	8.3727	14.3250
	teacher	Both parents dead	78	14.1154	12.93639	11.1987	17.0321
		Both parents alive	179	12.7821	11.11141	11.1432	14.4210
		Total	400	13.5025	11.73453	12.3490	14.6560
Care-giver	cbcl	Mother dead	100	15.4100	8.82615	13.6587	17.1613
	internalizing	Father dead	43	12.3953	8.13031	9.8932	14.8975
	problems	Both parents dead	78	12.5256	8.21738	10.6729	14.3784
	parent	Both parents alive	179	15.8268	9.06209	14.4902	17.1635
		Total	400	14.7100	8.84004	13.8411	15.5789
	cbcl	Mother dead	100	14.0100	8.56053	12.3114	15.7086
	externalizing	Father dead	43	10.9767	7.03220	8.8126	13.1409
	problems	Both parents dead	78	10.5513	7.89649	8.7709	12.3317
	parent	Both parents alive	179	14.0112	8.34373	12.7805	15.2419
		Total	400	13.0100	8.29499	12.1946	13.8254
	cbcl total	Mother dead	100	52.1100	29.33020	46.2903	57.9297
	problems	Father dead	43	40.2791	25.44960	32.4468	48.1113
	parent	Both parents dead	78	39.5513	26.66904	33.5383	45.5642
		Both parents alive	179	52.8771	30.58175	48.3664	57.3878
		Total	400	48.7325	29.51022	45.8318	51.6332
Youth	cbcl	Mother dead	100	25.4900	8.74036	23.7557	27.2243
	internalizing	Father dead	43	23.4884	11.24060	20.0290	26.9477
	problems youth	Both parents dead	78	23.8077	9.70347	21.6199	25.9955
		Both parents alive	179	23.1173	10.62077	21.5508	24.6839
		Total	400	23.8850	10.08345	22.8938	24.8762
	cbcl	Mother dead	100	27.8900	10.02108	25.9016	29.8784
	externalizing	Father dead	43	27.6977	13.58139	23.5179	31.8774
	problems youth	Both parents dead	78	27.6154	11.38948	25.0475	30.1833
		Both parents alive	179	25.3687	12.26891	23.5591	27.1783
		Total	400	26.6875	11.74477	25.5330	27.8420
	cbcl total	Mother dead	100	101.0600	32.51536	94.6082	107.5118
	problems youth	Father dead	43	97.3256	44.10956	83.7507	110.9005
		Both parents dead	78	98.3333	37.33828	89.9149	106.7518
		Both parents alive	178	91.9607	40.74232	85.9342	97.9872
		Total	399	96.0652	38.61634	92.2645	99.8658

Table 4.9a: Statistics for two a priori contrasts (1: both parents alive versus the others; 2: both without parental loss (rural sample) parents alive versus both parents dead) for behaviour problems in children with or without parental loss (urban sample)

Informant	CBCL problems	Variance	Contrast	t	df	Sig. (2-tailed)
Teacher	cbcl internalizing problems	Assume equal variances	1	-.237	396	.812
			2	-.076	396	.939
	cbcl externalizing problems	Assume equal variances	1	-.811	396	.418
			2	-1.047	396	.296
	cbcl total problems	Assume equal variances	1	-.649	396	.517
			2	-.839	396	.402
Caregiver	cbcl internalizing problems	Assume equal variances	1	2.633	396	.009
			2	2.781	396	.006
	cbcl externalizing problems	Assume equal variances	1	2.557	396	.011
			2	3.116	396	.002
	cbcl total problems	Assume equal variances	1	2.962	396	.003
			2	3.384	396	.001
Youth	cbcl internalizing problems	Assume equal variances	1	-1.098	396	.273
			2	-.505	396	.614
	cbcl externalizing problems	Assume equal variances	1	-1.949	396	.052
			2	-1.412	396	.159
	cbcl total problems	Assume equal variances	1	-1.738	395	.083
			2	-1.217	395	.224

4.2 The Impact of Loss of Parents on Symptoms of Posttraumatic Stress

Firstly, the means and standard deviations for each item of the DES were computed as presented in Table 4.10. The alpha reliability for the DES was sufficient: alpha = .77, N = 795, 28 items. A factor analysis was conducted to explore sub-scales of the DES, and statistically four separate factors might be discriminated. However, it seemed not possible to assign a substantive meaning to each of these factors. So, further analyses were

performed using the total DES scale, with a mean score of 29.11 (SD = 8.44).

Table 4.10: Descriptive Statistics for the Dissociative Experiences Scale Items

Item	Mean	Std. Deviation
Q1. Some people have the experience of driving or riding in a car or bus or subway and suddenly realising that they don't remember what has happed during all or part of the trip.	.9245	.86600
Q2. Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was said	1.2025	.77296
Q3. Some people have the experience of finding themselves in a place having no idea how they got there.	.6931	.82400
Q4. Some people have the experience of finding themselves dressed in clothes that they don't remember putting on.	.5283	.76124
Q5. Some people have the experience of finding new things among their belongings that they do not remember buying.	.9358	.81216
Q6. Some people sometimes find that they are approached by people that they do not know, who call them by another name or insist that they have met them before.	1.1409	.82179
Q7. Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person.	.8365	.82066
Q8. Some people are told that they sometimes do not recognize friends or family members.	1.0403	.81137
Q9. Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation).	1.0277	.83031
Q10. Some people have the experience of being accused of lying when they do not think that they have lied.	1.0113	.82231
Q11. Some people have the experience of looking in a mirror and not recognizing themselves.	.8767	.87068
Q12. Some people have the experience of feeling that other people, objects, and the world around them are not real.	.6541	.77091
Q13. Some people have the experience of feeling that their body does not seem to belong to them.	.9522	.87087
Q14. Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving the event.	1.2390	.79243
Q15. Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just reamed them.	1.1233	.74604
Q16. Some people have the experience of being in a familiar place but finding it strange and unfamiliar.	.9371	.81921
Q17. Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them.	.9887	.88430
Q18. Some people find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them.	1.1006	.82617
Q19. Some people find that they sometimes are able to ignore pain.	.9623	.82991
Q20. Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time.	1.1044	.87675
Q21. Some people sometimes find that when they are alone they talk out loud to themselves.	1.1962	.82879
Q22. Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people.	1.1006	.81388
Q23. Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations, etc.).	1.4252	.75641
Q24. Some people sometimes find that they cannot remember whether they have done something or have just thought about doing that thing (for example, not knowing whether they have just mailed a letter or have just thought about it).	1.1585	.78399
Q25. Some people find evidence that they have done things that they do not remember doing.	1.2214	.77186
Q26. Some people sometimes find writings, drawings, or notes among their belongings that they must have done but cannot remember doing.	1.2000	.78172
Q27. Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing.	1.3069	.76865
Q28. Some people sometimes feel as if they are looking at the world through a fog, so that people and objects appear far away or unclear.	1.2264	.81951

4.2.1 Correlations Between the DES and Age, Language Competence, and Teacher ratings of pupils' general intelligence

The DES was not correlated with age of the children, or with their language competence, but it was significantly associated with the pupils' score on the teacher ratings of pupils' general intelligence test, albeit with a weak effect size of r = -.09. Children with lower on the teacher ratings of general intelligence had somewhat higher DES scores (see Table 4.11).

Table 4.11: Correlations between the DES and Age, Language competence, and Teacher ratings of pupils' general intelligence

	Correlation	Age of pupil	language	Teacher ratings of pupils' general intelligence
dissociative experiences scale total	Pearson Correlation	.029	.001	-.087
	Sig. (2-tailed)	.413	.979	.014
	N	795	795	786

4.2.2 Means and SD for the DES Scale Differentiated by Gender and Rural Versus Urban

The DES was not associated with gender (F (1, 793) = 0.37, p =.54) or with the rural or urban residence of the pupils (F (1, 794) = 0.24, p = .63), see Table 4.12 for means and standard deviations per sub-group.

Table 4.12: Means and SD for the DES scale differentiated by gender and rural versus urban

Pupil gender	Mean	N	Std. Deviation
Boy	28.9316	395	7.94032
Girl	29.2950	400	8.90372
Total	29.1145	795	8.43546
Pupil region			
Urban	28.9671	395	9.32337
Rural	29.2600	400	7.46470
Total	29.1145	795	8.43546

4.2.3 Means and Standard Deviations for the Dissociative Experiences Scale by Child Status Group

Further, a test was conducted to ascertain whether children with or without parental losses differed on the DES (see Tables 4.13 and 4.14). As can be derived from these tables, there were no significant differences between child status groups on the DES.

Table 4.13: Means and SD for the dissociative experiences scale by child status group

					95% Confidence Interval for Mean	
Child Status Group	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound
Mother dead	200	29.0650	7.68610	.54349	27.9933	30.1367
Father dead	82	29.8049	9.45090	1.04368	27.7283	31.8815
Both parents dead	164	29.7439	8.73511	.68210	28.3970	31.0908
Both parents alive	349	28.6848	8.45905	.45280	27.7942	29.5754
Total	795	29.1145	8.43546	.29917	28.5272	29.7017

Table 4.14: Analysis of variance with the DES as criterion and child status as factor

Analysis of variance		df	F	Sig.
Between Groups	(Combined)	3	0.791	.499
	Unweighted	1	0.228	.633
Linear Term	Weighted	1	0.405	.525
	Deviation	2	0.984	.374
Within Groups		791		
Total		794		

Controlling for differences in teacher ratings of pupils' general intelligence did not affect the outcome of the previous analyses. Thus, based on these analyses, the conclusion is that dissociative experiences as reported by the subjects do not differ according to their parental loss experiences. That is, whether or not the pupils lost one or both parents did not significantly affect their DES scores, and their location of residence, rural or urban, was not important either. Moreover, for pupils in the various loss categories it did not make a difference whether they were from urban or rural areas, the interaction between residence and loss category was not significant, $F(3, 777) = 1.71$, $p = .16$.

4.3 The Impact of Loss of Parents on Academic Performance

Presented in this section is some descriptive information about the main indicators of academic performance, and about some important

background variables, with a special emphasis on gender differences. This is followed by a description of the associations between the indicators of academic performance and relevant background variables. Thereafter, an investigation of differences in academic performance between rural and urban pupils is carried out. Multivariate analyses of variance are computed to test whether the child's status - being orphaned or not - is associated with his or her academic achievement, and whether possible associations are specific for rural or urban pupils.

4.3.1 Univariate Descriptives of the Main Variables and Their Associations With Gender

Table 4.15a: Descriptives for language, math, teacher ratings of pupils' general intelligence, and age split by gender

Pupil gender	Descriptives	language	Math	Teacher ratings of pupils' general intelligence	Age of pupil
Boy	Mean	12.1848	15.5519	1.9590	12.2532
	Std. Deviation	5.69342	5.70326	.77118	1.17145
	N	395	395	390	395
Girl	Mean	11.8675	14.8400	1.8990	11.9450
	Std. Deviation	5.90951	5.67538	.73253	1.17064
	N	400	400	396	400
Total	Mean	12.0252	15.1937	1.9288	12.0981
	Std. Deviation	5.80166	5.69681	.75208	1.18042
	N	795	795	786	795

Table 4.15b: ANOVA for the differences between girls and boys on school performance

Variables	ANOVA		df	F	Sig.
language * Pupil gender	Between Groups	(Combined)	1	.594	.441
	Within Groups		793		
	Total		794		
math * Pupil gender	Between Groups	(Combined)	1	3.112	.078
	Within Groups		793		
	Total		794		
Teacher ratings of pupils' general intelligence * pupil gender	between groups	(combined)	1	1.250	.264
	Within Groups		784		
	Total		785		
Age of pupil * Pupil gender	Between Groups	(Combined)	1	13.763	.000
	Within Groups		793		
	Total		794		

As depicted above in Tables 4.15a and 4.15b, there are only few differences between male and female pupils in the total sample. Boys and girls do not show significantly different language or math performance, and they do not differ in their teacher ratings of general intelligence. The only difference is their age: Boys appear to be somewhat older than girls, maybe because boys are likely to repeat grades more often.

4.3.2 Correlations Between the Main Variables

Table 4.16: Correlations between age, language, math and teacher ratings of pupils' general intelligence (N = 795)

Variables	Correlations	Age of pupil	language	math	Teacher ratings of pupils' general intelligence
Age of pupil	Pearson Correlation	1			
	Sig. (2-tailed)	.			
	N	795			
language	Pearson Correlation	-.046	1		
	Sig. (2-tailed)	.195	.		
	N	795	795		
math	Pearson Correlation	-.051	.436	1	
	Sig. (2-tailed)	.151	.000	.	
	N	795	795	795	
Teacher ratings of pupils' general intelligence	Pearson Correlation	-.067	.034	.112	1
	Sig. (2-tailed)	.062	.343	.002	.
	N	786	786	786	786

In Table 4.16 above, the correlations between the central variables of this section are presented. As can be seen, there was a significant correlation between the language and math scores, $r = .44$, $p < .01$. Higher scores on language were associated with higher scores on math. Furthermore, higher scores on math were associated with higher teacher ratings of pupils' general intelligence, $r = .11$, $p < .01$. However, age did not significantly correlate with any of the school performance tests.

4.3.3 Differences in School Performance Between Urban and Rural pupils

Table 4.17: School performance compared between urban and rural pupils

Location	Statistics	language	math	Teacher ratings of pupils' general intelligence	Age of pupil
Urban	Mean	13.8785	16.7873	2.0128	12.2025
	N	395	395	391	395
	Std. Deviation	6.56211	6.23730	.78599	.98181
Rural	Mean	10.1950	13.6200	1.8456	11.9950
	N	400	400	395	400
	Std. Deviation	4.20728	4.60093	.70815	1.34144
Total	Mean	12.0252	15.1937	1.9288	12.0981
	N	795	795	786	795
	Std. Deviation	5.80166	5.69681	.75208	1.18042

Table 4.18: Statistics for the differences between the rural and urban pupils on Language, Math, Teacher ratings of pupils' general intelligence, and Age

	Differences		df	F	Sig.
language * RURAL	Between Groups	(Combined)	1	88.991	.000
	Within Groups		793		
	Total		794		
math * RURAL	Between Groups	(Combined)	1	66.503	.000
	Within Groups		793		
	Total		794		
Teacher ratings of pupils' general intelligence * RURAL	Between Groups	(Combined)	1	9.823	.002
	Within Groups		784		
	Total		785		
Age of pupil * RURAL	Between Groups	(Combined)	1	6.183	.013
	Within Groups		793		
	Total		794		

Some significant differences in performance between the rural and urban schools were found. In particular, the rural pupils scored lower on the language, math and teacher ratings of general intelligence tests, whereas the rural schools enrolled somewhat younger pupils. When age differences were controlled for, the differences in school performance between rural and urban pupils still remained significant.

Table 4.19: Multivariate analysis of covariance (age as covariate) with school performance tests as predictors of rural versus urban pupils (N =795)

Dependent Variable	Location	Mean	Std. Error	95% Confidence Interval Lower Bound	Upper Bound
math	urban	16.862(a)	.278	16.316	17.407
	rural	13.605(a)	.276	13.063	14.148
language	urban	13.987(a)	.278	13.441	14.533
	rural	10.183(a)	.277	9.639	10.726
Teacher ratings of pupils' general intelligence	urban	2.018(a)	.038	1.943	2.092
	rural	1.841(a)	.038	1.767	1.915

Covariates appearing in the model were evaluated at the following values:
Age of pupil = 12.0992.

4.3.4 Loss of parent(s) Vs No Loss as Related to School Performance

Table 4.20: Descriptives for Child Status as related to School Performance

Variables	Status	N	Mean	Std. Deviation	95% Confidence Interval for Mean Lower Bound	Upper Bound
Age of pupil	Mother dead	200	12.0150	1.13189	11.8572	12.1728
	Father dead	82	12.3537	1.16928	12.0967	12.6106
	Both parents dead	164	12.6159	1.29842	12.4156	12.8161
	Both parents alive	349	11.8424	1.06179	11.7306	11.9542
	Total	795	12.0981	1.18042	12.0159	12.1803
Teacher ratings of pupils' general intelligence	Mother dead	197	1.8680	.75785	1.7615	1.9745
	Father dead	82	1.8049	.74435	1.6413	1.9684
	Both parents dead	162	1.9136	.72570	1.8010	2.0262
	Both parents alive	345	2.0000	.75867	1.9197	2.0803
	Total	786	1.9288	.75208	1.8761	1.9814
language	Mother dead	200	11.9900	6.05751	11.1454	12.8346
	Father dead	82	12.2195	6.02879	10.8948	13.5442
	Both parents dead	164	11.4207	5.31693	10.6009	12.2406
	Both parents alive	349	12.2837	5.81934	11.6710	12.8963
	Total	795	12.0252	5.80166	11.6213	12.4291
math	Mother dead	200	14.7200	5.73113	13.9209	15.5191
	Father dead	82	14.9390	5.81897	13.6605	16.2176
	Both parents dead	164	14.6890	4.79720	13.9493	15.4287
	Both parents alive	349	15.7622	6.00126	15.1304	16.3940
	Total	795	15.1937	5.69681	14.7971	15.5903

Table 4.21: Contrast Tests for the difference between no parental loss versus any parental loss (contrast 1), and no parental loss versus both parents dead (contrast 2)

Variables	Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
Age of pupil	1	-1.4573	.25315	-5.757	791	.000
	2	-.7734	.10818	-7.150	791	.000
Teacher ratings of pupils' general intelligence	1	.4135	.16699	2.476	782	.013
	2	.0864	.07146	1.209	782	.227
language	1	1.2208	1.28566	.950	791	.343
	2	.8629	.54941	1.571	791	.117
math	1	2.9385	1.25944	2.333	791	.020
	2	1.0732	.53820	1.994	791	.046

Regarding the central question about how the status of the pupils is associated with their school performance, it was found that the math performance of pupils who did not lose any parent was significantly better than the math performance of the pupils who lost one or both parents ($t = 2.33$, $p = .02$). It should be noted that this difference did also exist for the contrast between pupils with both parents alive versus those who lost both parents. For the teacher ratings of pupils' general intelligence , a significant contrast was also found between pupils with both parents alive versus their peers who had lost one or both parents. The latter pupils scored somewhat lower on teacher ratings of general intelligence ($t = 2.48$, $p = .01$).

For language performance, no such trend was found: pupils who lost one or both parents did perform equally well as the pupils with both parents alive. Children who lost one or both parents were significantly older than the pupils who had both parents alive, and because age is related to math performance, it was necessary to control for age in the analysis testing the association between pupil status and math. In an analysis of covariance, with age as a covariate, the same significant contrasts were found between pupils with both parents alive versus their peers with one or both parents dead for their math performance and teacher ratings of general intelligence scores.

In order to test whether the associations between school performance and child status equally held for rural versus urban pupils, a multivariate analysis of variance was conducted with child status and rural versus urban location as factors, and school performance indicators as predictors (see Table 4.21 for means and SD's). Apart from significantly higher school performances of urban pupils, there was also a significant interaction between child status and rural versus urban for teacher ratings of pupils' general intelligence: in particular urban pupils with both parents alive outperformed the other pupils ($F(3, 786) = 3.57$, $p = .01$). The contrast between the math performance of pupils with both parents alive versus the pupils who lost one or both parents remained significant ($p = .01$). Thus, pupils with both parents alive outperformed the other pupils in math, regardless of their being in a rural or urban school, whereas they especially outperformed the other pupils on the teacher ratings of general intelligence when they were in an urban school.

Table 4.22: Child status and academic performance in rural versus urban schools

Dependent Variable	Pupil status	Location	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
math	Mother dead	urban	16.190	.548	15.114	17.266
		rural	13.299	.556	12.207	14.391
	Father dead	urban	17.385	.878	15.662	19.107
		rural	12.721	.836	11.080	14.362
	Both parents dead	urban	15.812	.594	14.645	16.979
		rural	13.519	.625	12.293	14.746
	Both parents alive	urban	17.593	.424	16.760	18.425
		rural	14.101	.411	13.295	14.908
language	Mother dead	urban	14.430	.550	13.350	15.510
		rural	9.608	.559	8.511	10.705
	Father dead	urban	14.077	.881	12.347	15.807
		rural	10.535	.839	8.887	12.182
	Both parents dead	urban	13.024	.597	11.852	14.195
		rural	9.701	.627	8.470	10.932
	Both parents alive	urban	14.108	.426	13.272	14.944
		rural	10.697	.413	9.887	11.506
Teacher ratings of pupils' general intelligence	Mother dead	urban	1.860	.074	1.714	2.006
		rural	1.876	.075	1.728	2.024
	Father dead	urban	1.872	.119	1.638	2.105
		rural	1.744	.113	1.522	1.966
	Both parents dead	urban	1.918	.081	1.760	2.076
		rural	1.909	.085	1.743	2.075
	Both parents alive	urban	2.186	.057	2.073	2.298
		rural	1.826	.056	1.717	1.935

4.4 Associations Between Behaviour Problems, Posttraumatic Stress Symptoms and Academic Achievement

In Table 4.23 below, the correlations for the associations between behaviour problems, dissociation and school performance are presented. In general, no associations between behaviour problems, dissociation and school performance seemed to be evident, except for the previously discussed associations between lower teacher ratings of pupils' general intelligence and more behaviour problems as perceived by the teachers.

Table 4.23: Correlations between Behaviour Problems, Dissociation, and School Performance (total sample)

Variables	Correlations	cbcl internalizing problems teacher	cbcl externalizing problems teacher	cbcl total problems teacher	dissociative experiences scale total	language	math	Teacher ratings of pupils' general intelligence
cbcl internalizing problems teacher	Pearson Correlation	1						
	Sig. (2-tailed)	.						
cbcl externalizing problems teacher	Pearson Correlation	.374	1					
	Sig. (2-tailed)	.000	.					
cbcl total problems teacher	Pearson Correlation	.755	.834	1				
	Sig. (2-tailed)	.000	.000	.				
dissociative experiences scale total	Pearson Correlation	-.073	-.044	-.058	1			
	Sig. (2-tailed)	.039	.214	.105	.			
language	Pearson Correlation	.025	.090	.065	.001	1		
	Sig. (2-tailed)	.484	.011	.068	.979	.		
math	Pearson Correlation	-.022	.020	-.007	-.020	.436	1	
	Sig. (2-tailed)	.536	.570	.834	.576	.000	.	
Teacher ratings of pupils' general intelligence	Pearson Correlation	-.186	-.168	-.273	-.087	.034	.112	1
	Sig. (2-tailed)	.000	.000	.000	.014	.343	.002	.

In Tables 4.24 and 4.25, the correlations for the gender groups are presented separately. No large differences in correlational structure between girls and boys was found. Basically, the associations (or absence thereof) between problems, dissociation, and school performance were similar for both sexes.

Table 4.24: Correlations between Behaviour Problems, Dissociation, and School Performance
(boys)

Variables	Correlations	cbcl internalizing problems teacher	cbcl externalizing problems teacher	cbcl total problems teacher	dissociative experiences scale total	language	math	Teacher ratings of pupils' general intelligence
cbcl internalizing problems teacher	Pearson Correlation	1						
	Sig. (2-tailed)	.						
cbcl externalizing problems teacher	Pearson Correlation	.468	1					
	Sig. (2-tailed)	.000	.					
cbcl total problems teacher	Pearson Correlation	.776	.873	1				
	Sig. (2-tailed)	.000	.000	.				
dissociative experiences scale total	Pearson Correlation	-.043	-.034	-.033	1			
	Sig. (2-tailed)	.396	.502	.515	.			
language	Pearson Correlation	.076	.134	.106	-.051	1		
	Sig. (2-tailed)	.134	.008	.034	.310	.		
math	Pearson Correlation	-.021	.070	.018	-.043	.440	1	
	Sig. (2-tailed)	.675	.167	.726	.398	.000	.	
Teacher ratings of pupils' general intelligence	Pearson Correlation	-.201	-.273	-.314	-.138	.031	.045	1
	Sig. (2-tailed)	.000	.000	.000	.006	.544	.375	.

Table 4.25: Correlations between Behaviour Problems, Dissociation, and School Performance (girls)

Variables	Correlations	cbcl internalizing problems teacher	cbcl externalizing problems teacher	cbcl total problems teacher	dissociative experiences scale total	Language	math	Teacher ratings of pupils' general intelligence
cbcl internalizing problems teacher	Pearson Correlation	1						
	Sig. (2-tailed)	.						
cbcl externalizing problems teacher	Pearson Correlation	.304	1					
	Sig. (2-tailed)	.000	.					
cbcl total problems teacher	Pearson Correlation	.729	.816	1				
	Sig. (2-tailed)	.000	.000	.				
dissociative experiences scale total	Pearson Correlation	-.106	-.056	-.083	1			
	Sig. (2-tailed)	.033	.263	.098	.			
language	Pearson Correlation	-.010	.073	.043	.046	1		
	Sig. (2-tailed)	.846	.146	.392	.355	.		
math	Pearson Correlation	-.003	.003	-.009	.003	.432	1	
	Sig. (2-tailed)	.949	.945	.854	.958	.000	.	
Teacher ratings of pupils' general intelligence	Pearson Correlation	-.165	-.099	-.238	-.039	.035	.177	1
	Sig. (2-tailed)	.001	.049	.000	.434	.488	.000	.

The correlations between behaviour problems, dissociation and school performance also did not differ substantially between the rural and urban groups. Basically a similar pattern of correlations was found (see Tables 4.26 and 4.27).

Table 4.26: Correlations between Behaviour Problems, Dissociation, and School Performance (urban)

Variables	Correlation	cbcl internalizing problems teacher	cbcl externalizing problems teacher	cbcl total problems teacher	dissociative experiences scale total	language	math	Teacher ratings of pupils' general intelligence
cbcl internalizing problems teacher	Pearson Correlation	1						
	Sig. (2-tailed)	.						
cbcl externalizing problems teacher	Pearson Correlation	.356	1					
	Sig. (2-tailed)	.000	.					
cbcl total problems teacher	Pearson Correlation	.743	.830	1				
	Sig. (2-tailed)	.000	.000	.				
dissociative experiences scale total	Pearson Correlation	-.131	-.063	-.084	1			
	Sig. (2-tailed)	.009	.210	.095	.			
language	Pearson Correlation	-.018	.035	-.003	-.027	1		
	Sig. (2-tailed)	.723	.484	.951	.598	.		
math	Pearson Correlation	-.040	-.031	-.058	-.066	.570	1	
	Sig. (2-tailed)	.428	.540	.249	.188	.000	.	
Teacher ratings of pupils' general intelligence	Pearson Correlation	-.157	-.221	-.331	-.135	.031	.098	1
	Sig. (2-tailed)	.002	.000	.000	.008	.541	.052	.

Table 4.27: Correlations between Behaviour Problems, Dissociation, and School Performance (rural)

Variables	Correlations	cbcl internalizing problems teacher	cbcl externalizing problems teacher	cbcl total problems teacher	dissociative experiences scale total	language	math	Teacher ratings of pupils' general intelligence
cbcl internalizing problems teacher	Pearson Correlation	1						
	Sig. (2-tailed)	.						
cbcl externalizing problems teacher	Pearson Correlation	.394	1					
	Sig. (2-tailed)	.000	.					
cbcl total problems teacher	Pearson Correlation	.786	.820	1				
	Sig. (2-tailed)	.000	.000	.				
dissociative experiences scale total	Pearson Correlation	.021	.004	-.001	1			
	Sig. (2-tailed)	.681	.943	.977	.			
language	Pearson Correlation	.021	-.008	-.001	.071	1		
	Sig. (2-tailed)	.676	.875	.991	.155	.		
math	Pearson Correlation	-.067	-.069	-.096	.069	-.007	1	
	Sig. (2-tailed)	.183	.171	.055	.168	.895	.	
Teacher ratings of pupils' general intelligence	Pearson Correlation	-.258	-.166	-.272	-.018	-.058	.066	1
	Sig. (2-tailed)	.000	.001	.000	.721	.248	.191	.

The correlations between behaviour problems, dissociation and school performance also did not differ substantially between the pupils who lost one or both parents, and those with both parents alive. Again, basically a similar pattern of correlations was found (see Tables 4.28 and 4.29).

Table 4.28: Correlations between Behaviour Problems, Dissociation, and School Performance

(with parental loss)

	Correlations	cbcl internalizing problems teacher	cbcl externalizing problems teacher	cbcl total problems teacher	dissociative experiences scale total	language	math	Teacher ratings of pupils' general intelligence
cbcl internalizing problems teacher	Pearson Correlation	1						
	Sig. (2-tailed)	.						
cbcl externalizing problems teacher	Pearson Correlation	.343	1					
	Sig. (2-tailed)	.000	.					
cbcl total problems teacher	Pearson Correlation	.741	.832	1				
	Sig. (2-tailed)	.000	.000	.				
dissociative experiences scale total	Pearson Correlation	-.056	-.028	-.046	1			
	Sig. (2-tailed)	.237	.560	.332	.			
language	Pearson Correlation	.040	.118	.090	.053	1		
	Sig. (2-tailed)	.404	.013	.058	.261	.		
math	Pearson Correlation	-.007	.062	.018	-.005	.385	1	
	Sig. (2-tailed)	.875	.192	.707	.918	.000	.	
Teacher ratings of pupils' general intelligence	Pearson Correlation	-.165	-.126	-.243	-.055	.023	.056	1
	Sig. (2-tailed)	.000	.008	.000	.245	.625	.244	.

Table 4.29: Correlations between Behaviour Problems, Dissociation, and School Performance (without parental loss)

Variables	Correlations	cbcl internalizing problems teacher	cbcl externalizing problems teacher	cbcl total problems teacher	dissociative experiences scale total	language	math	Teacher ratings of pupils' general intelligence
cbcl internalizing problems teacher	Pearson Correlation	1						
	Sig. (2-tailed)	.						
cbcl externalizing problems teacher	Pearson Correlation	.420	1					
	Sig. (2-tailed)	.000	.					
cbcl total problems teacher	Pearson Correlation	.778	.837	1				
	Sig. (2-tailed)	.000	.000	.				
dissociative experiences scale total	Pearson Correlation	-.102	-.075	-.085	1			
	Sig. (2-tailed)	.057	.161	.113	.			
language	Pearson Correlation	.009	.054	.037	-.061	1		
	Sig. (2-tailed)	.862	.314	.491	.254	.		
math	Pearson Correlation	-.031	-.025	-.025	-.029	.494	1	
	Sig. (2-tailed)	.564	.644	.644	.593	.000	.	
Teacher ratings of pupils' general intelligence	Pearson Correlation	-.207	-.222	-.307	-.119	.040	.162	1
	Sig. (2-tailed)	.000	.000	.000	.027	.464	.003	.
	N	345	345	345	345	345	345	345

In order to examine whether loss of parents was associated with the most important outcome variables (behaviour problems, dissociation, and school achievement) gender, location of residence, age and teacher ratings of pupils' general intelligence simultaneously were controlled for, a multivariate analysis of covariance was computed. In this MANCOVA, total problem score (rated by the teacher), dissociation score, language, and

math scores were the dependent variables, and gender, parental loss, and location of residence were included as factors. Age and teacher ratings of pupils' general intelligence were covariates. In this model all two- and three-way interactions were tested for. No significant two- or three-way interactions were found, $F(12, 2300) = 1.31$, $p = .21$. This outcome indicates that the association between parental loss on the one hand and behavioral problems, dissociation, and academic achievement on the other hand was independent of gender, location of residence, age, and teacher ratings of pupils' general intelligence.

CHAPTER FIVE

DISCUSSION

This chapter discusses the findings that have been presented in chapter four based on the same order of key variables. These are:

1. the impact of loss of parents on behaviour problems
2. the effect of urban versus rural dichotomy on behaviour problems
2. the impact of loss of parents on symptoms of posttraumatic stress
3. the impact of loss of parents on academic performance
4. associations between problem behaviours, posttraumatic stress symptoms and academic achievement.

5.1 The impact of Loss of Parents on Behaviour Problems

This section sought to ascertain differences in the level and nature of behaviour problems between children who had lost one or both parents and those with both parents alive, as measured by the CBCL, and the following issues emerged:

Firstly, reliability was computed to establish if all the scales of the CBCL were consistently completed across the three categories of informants. As shown above (see Table 4.1), high alpha reliabilities were found,

indicating consistency in the way the CBCL items were perceived by the various informants, which is a positive finding. These reliability figures are in line with international standards for CBCL scales.

Gender differences in behaviour problems were also explored. The data reflected that only teachers reported significant differences in behaviour problems between boys and girls as per the computed means and standard deviation, at 95% confidence interval. Contrary to expectation, they observed more internalizing and externalizing, and total behaviour problems in girls than boys. Caregivers and the children themselves did not report such differences. From available literature, internalizing problems are more common in girls than in boys, whereas externalizing problems are more common in boys than in girls (Keenan & Show, 1997, Kellan et al., 1998, Stowe et al., 1999). In the present study it was found that girls also showed more externalizing problems. Possible reasons for this difference could have to do with the observation that cultural pressures on girls that requires them to behave calmly as "proper women" tend to be more pronounced as they reach adolescence. In the Zambian culture it is speculated that girls can get away with being loud and tom-boyish only at earlier stages of their development (Kasonde-Ng'andu, 1986; Ngulube, 1989).

It should be noted that the three categories of informants substantially differed in the average number of behaviour problems they reported, with

teachers reporting significantly fewer problems than caregivers. Caregivers in turn appeared to report significantly fewer problems than the children themselves. The children reported a surprisingly large number of problems of internalizing as well as externalizing nature, compared to teachers and caregivers. The paired t-tests for differences between teacher, caregiver and youth report on internalizing and externalizing behaviour problems, revealed that all comparisons were significant (see Table 4.1.3).

Some of these differences could be due to the fact that teachers and caregivers perceive the children in different contexts. Teachers interact with the children in a restricted classroom situation compared to the caregivers who see the children in a more relaxed home environment and for longer periods. The classroom setting in Zambia usually is rather strictly structured and disciplined, with most teaching done in the way of lecturing the class as a total, instead of more interactive and individualized instruction. The classroom size of 40 or more pupils does not allow for much interaction between the pupils or between the teacher and the individual children. Strict regulations of the interactions taking place in the classroom are required to keep this number of children at work. So, in this structured context, there is less room for acting out externalizing problems, or to diagnose internalizing problems of the individual children. In other words, because of these contextual

differences, teachers may be less likely to notice behaviour problems in their children than parents.

As for the overwhelming number of behaviour problems reported by the youth themselves, it could be an indication of difficulties among children to complete questionnaires or simply a reflection of their feeling less adjusted. Of course, the completion of a long questionnaire like the CBCL by young children might go beyond their abilities to comprehend the items, or their ability to concentrate on the same task during an extended period of time. However, the alpha reliabilities of the self reported behaviour problems did not differ from the reports by the caregivers or the teachers. If some of the items of the CBCL would have been too difficult to comprehend, the alpha reliabilities would have been lower. Thus, the high level of behaviour problems reported by the children themselves may actually be related to their experiences of real problems of adapting to difficult life circumstances in Zambia, not only for pupils who have to live without their parents, but also for those children who live in intact families. The children of course have the most immediate access to the internalizing and externalizing problems they experience. For example, feelings of anxiety or depression might not be noticed by external observers, even though they are the parents or teachers, but might only be visible to the children themselves.

Teachers reported more behaviour problems in older pupils and in pupils with lower teacher ratings of general intelligence. This might reflect the reality of older pupils being more disobedient and more challenging of the teachers' authority. Alternatively, as the age range is rather wide (9-17 yrs of age), some of the older pupils might experience the problems commonly associated with adolescence, such as the search for personal identity, and the anxiety about their future as young adults in a difficult survival context. On the other hand, teacher's perception could be influenced by the belief that older pupils tend to perform poorly on average, having repeated grades more often, which in turn makes them behave less well adapted. This points to a 'halo effect' in that older pupils may be considered to perform badly in cognitive, but also in social and personal respects. It should be noted, however, that in contrast caregivers report more behaviour problems in children who are younger. In the family context, the younger children might still have to be socialized in the rules and regulations of that context, more often surpassing these rules unintentionally. The parents might feel more often obliged to discipline their younger children, and thus be more aware of the children's transgressions.

The youth reported behaviour problems were however not related to teacher ratings of pupils' general intelligence or age, which is a positive outcome because it is an indication of the validity of the youth self report. Only their language competency was associated with self-reported

behaviour problems, in that pupils with better language competence reported fewer behaviour problems. This might be related to their better understanding of the CBCL questions, and therefore being able to answer these questions in a more realistic way. Also, pupils performing better on the language test might be performing better in school, and thus being better adapted in general. Further research is needed to test these different interpretations.

Comparisons of urban against rural reports from the three categories of informants pertaining to behaviour problems revealed substantial differences on all CBCL scales. The teachers of the rural pupils reported fewer behaviour problems than their counterparts in the urban sample, while caregivers and children themselves portrayed a conflicting scenario, depicting rural pupils to have more behaviour problems than those in the urban site. These differences between rural and urban schools are quite substantial, with the teachers reporting nearly twice as many externalizing problems in urban children, and the caregivers reporting almost three times as many externalizing problems in the rural pupils. A possible interpretation might be related to the stricter social control in rural areas, in which the community is more aware of the children's misbehaviours, and report to the caregivers more about these behaviour problems. The urban environment is more anonymous, and much of the children's externalizing behaviour may be out of awareness of the caregivers and their social community.

As noted above, the central point of this chapter was to test whether there were significant differences in the level of behaviour problems between children with one or both parents dead, and those with no loss. In line with the hypothesis, teachers report fewer internalizing problems in pupils with both parents alive, while on the contrary, caregivers report more behaviour problems. Because of the noted differences in the CBCL scores between rural and urban pupils, analyses for each of the sub-groups were done separately. In this scenario, the differences between the loss categories for the caregiver reported behaviour problems found in the total sample were not evident in the urban sample. Instead, the urban pupils with both parents alive appeared to show fewer internalizing and total behaviour problems as perceived by their teachers, compared to pupils who lost both parents. This finding confirms the finding in the total sample, and it confirms the initial hypothesis. Loss of one or both parents especially is associated with increased internalizing problem behaviours such as feelings of anxieties and depression.

The outcome in the rural sample however was unexpected, with a larger number of behaviour problems in children with both parents alive as perceived by the caregivers (see Tables 4.1.9 & 4.1.9a). This finding is difficult to interpret. One might speculate that children who lost one or both parents may feel less free to express their anxieties associated with traumatic loss, and have become more subdued. But this does not explain why the same does not hold for the urban pupils. It should be noted that

the elevated number of problems in non-orphaned children is not observed by the teacher or the children themselves. Thus, one might have to look for an explanation in the caregivers of the rural children more than in the children themselves. What aggravates the lives of biological parents in rural areas, compared to non-biological caregivers of orphaned children, however, remains unclear.

In conclusion, the seemingly self-evident hypothesis of orphans showing more behaviour problems has been refuted in this study, at least with regard to the rural children. Their situation and that of their caregivers and parents appear to be more complicated than was hypothesized, and the loss of one or both parents does not appear to be the most important factor in the emergence of behaviour problems in rural children. The rural context might contain even more stressful factors than the loss of a parent, which overrides the effects of traumatic loss. What stressful factors are relevant here, especially for the rural children with both parents alive, remains elusive.

More positively formulated, one might suggest that rural children are coping better with potentially traumatic losses than the literature seems to suggest. Their resilience in the face of loss may be more impressive than was hypothesized before, and the search for protective factors should be the next step in this research programme. It may be that in particular rural areas the social community serves as a buffer for loss

experiences in young children, and even over-compensates for these losses by providing alternative care arrangements for the orphans. In the current study an attempt was made to assess the alternative care of children who experienced parental loss, but the various informants did not agree on the type of alternative care. Further research is needed to elucidate these protective alternative care arrangements, and this research might have to rely more on observational assessments of these arrangements than on self-reports or reports from teachers and caregivers.

In sum, only partial support was found for the hypothesis that children with parental loss would show more problem behaviours. The potentially traumatic experience of parental loss does not appear to lead to an increase in problem behaviours automatically and in each and every child. In particular in rural children the hypothesis was refuted, and should be replaced by a more complicated model taking into account the potentially protective factors inherent in the rural child rearing setting.

5.2 The Impact of Loss of Parents on Symptoms of Posttraumatic Stress

An attempt was made to explore differences in dissociation as measured by the DES between children who had experienced loss of one or both

parents against the comparison group with both parents alive. The following resulted from the various analyses:

Considering age, language competence and teacher ratings of pupils' general intelligence, no correlation was found between the DES and age of the children, and none with the children's language competence as tested with the Pearson correlation. However, DES scores were significantly associated with the pupils' scores on the teacher ratings of general intelligence, although as shown above, with a weak effect size of r= -.09. According to this outcome, children with lower scores on the teacher ratings of general intelligence had slightly higher DES scores. Pupils who scored lower on the teacher ratings of general intelligence seemed to be more likely to exhibit symptoms of dissociation. However, the effect was weak, and it is unclear whether the nature of the questionnaire, the 28-item DES was not responsible for this association. One can imagine, for example, that the rather complicated DES questions might have been less well understood by subjects with a lower teacher ratings of pupils' general intelligence who might have scored higher although they would not be different in dissociation. It would be advisable to undertake a more comprehensive study to unpack systematically the cognitive factors involved in completing the DES, to test this alternative hypothesis.

The DES was also not related with gender or with the rural/urban residence of pupils. The hypothesis that rural pupils would have lower scores on the DES because of the emotional support and security provided by the extended family was not supported by the findings from this study. The reason for this unexpected outcome, could be the fact that although in the urban areas it is said that more nuclear families are found, because of high levels of poverty in the rural areas the extended family there is likely to be facing challenges in executing its role of caring effectively. Availability of basic resources, especially food, binds members of the extended family. Serious scarcity of goods to satisfy these essential needs threatens the bond that enables the extended family to be effective in times of hardships for offspring.

According to the 2004 Central Statistics Office (CSO), Living Conditions Monitoring Survey, the incidence of poverty in urban areas stood at 53 percent as compared to 78 percent of the population living in poverty in the rural areas. The World Bank Report on poverty (1994) supports the observation that rural poverty is more prevalent, deeper, and more severe than urban poverty. Another point worth noting on the issue of poverty is the fact that most of the urban schools in this study were drawn from high density areas, popularly referred to as "shanty compounds" because that is where, according to available records, most of the poor orphans are found.

Analysis of variance was computed to test whether children with or without parental loss differed on the DES. Surprisingly, findings revealed no significant differences between child status groups on the DES. As noted above, possible reasons for such an outcome in terms of alternative, buffering care, are difficult to map because the question pertaining to the child-care alternative arrangement did not yield sufficient and reliable information. Inconsistencies were noted in the data from the various informants on this issue. Some co-workers in the field sites were of the view that reliable data on orphans is difficult to find because with the increasing number of NGOs, including churches, providing different types of support through schools and community Based Organisations (CBO's) some people seem to be deliberately giving wrong information as a means of gaining from the situation. It is advisable that future studies with a similar focus adopt an anthropological approach, which involves a researcher(s) staying in the community for some time, long enough to establish real rapport, before getting started with sample selection and actual data-collection. It is needless to say that this approach would have budget implications.

In sum, this part of the study was designed to find out differences in dissociation between children who have lost one or both parents and their peers with both parents alive. Contrary to expectation, the hypothesis stipulating that pupils who had lost one or both parents would score higher on the measure of dissociation (DES) was rejected, indicating no

significant difference in levels of post-traumatic stress among the various status groups. Similarly, there was no significant difference between rural and urban in the scores on the DES. Because of the noted inconsistencies in the data from the various informants on the alternative care arrangement, it is beyond the scope of this study to single out environmental factors that may have been involved in bolstering resiliency. It would warrant another study specifically designed to systematically target this aspect, taking into account the nature of relationships of the orphaned children in the family, community and school settings, coupled with information on age of the children and time when trauma was experienced.

5.3 The Impact of Loss of Parents on Academic Performance

The central question that the present study sought to explore was whether there would be significant differences in school achievement between pupils who had lost one or both parents and those with both parents alive. The first set of analyses which sought to find out whether the main variables: language, math, teacher ratings of pupils' general intelligence, and age would have any associations with gender, revealed only few differences between male and female pupils in the total sample. Boys and girls showed no significant differences in performance on language and math. A similar picture was portrayed in the analyses on teacher ratings of pupils' general intelligence. Somehow, these findings

are contrary to what is documented in available literature where it has repeatedly been shown that overall girls tend to perform more poorly than boys, especially in Math and Science (e.g. Zambia DHS EdData, 2002). However, when boys and girls are compared at grade level, no significant differences are evident from grades 1 to 4 and at the beginning of middle primary level, from Grades 5-7 (Kasonde-Ng'andu et al., 1999). These findings confirm previous studies which indicate that girls tend to perform less well than boys as they get to higher grades of primary school. Studies focusing on factors affecting primary school attendance and performance (e.g., Maimbolwa-Sinyangwe & Chilangwa 1995; Lungwangwa et al., 1999; & Munachonga, 1995; Milimo, 1998; Mwansa, 1995; Kelly et al., 1999), revealed that the declining performance of girls at higher levels of primary grades is due to household chores, puberty and early marriages, as well as parents' and teachers' ambivalent attitudes to the value of educating girls.

From the computed correlations between age, language, math and teacher ratings of pupils' general intelligence, there was a strong relationship between language and math scores ($r=.44$, $p < .01$). In other words, higher scores on language were associated with higher scores on math. Similarly, higher scores on math were associated with higher teacher ratings of pupils' general intelligence ($r=.11$ $p< .01$). However, age did not correlate with any of the school performance tests. In fact, although the correlation between math and teacher ratings of pupils'

general intelligence was significant, the strength of the association was modest.

Analyses aimed at ascertaining differences between urban and rural pupils on language, Math, teacher ratings of pupils' general intelligence and age revealed significant differences in performance between the rural and urban schools with rural pupils scoring lower on language, math and teacher ratings of pupils' general intelligence. The differences were the same even when age was controlled for. This is not surprising, considering the disparity in the quality of education between rural and urban schools. Although the schooling situation is generally bad as evidenced by the poor infrastructure, over-crowdedness, scarcity of teachers, textbooks and other learning materials, the rural area is worse off. The recent statistics from the 2002 Zambia DHS EdData survey indicate that children in the urban areas are twice as likely to have basic numeracy skills (77%) as children in the rural areas (38%). Furthermore, children in urban areas are more than five times as likely to be literate as children in rural areas (37% versus 77%).

Contrast tests that sought to ascertain child status as related to school performance revealed that the math performance of pupils with both parents alive was significantly better than that for pupils who lost one or both parents ($t=2.33$, $p=.02$). A similar picture emerged for the teacher ratings of pupils' general intelligence where a significant contrast was

found between pupils with parents alive versus those who lost one or two parents, with the latter pupils' scores being somewhat lower (t=2.48, p=.013). This finding is in support of the hypothesis that stipulated that pupils in the loss group would have lower scores on the achievement tests. Also the literature reviewed in this study shows that orphans experience various school related problems, including irregular attendance of classes due to too much household chores (e.g. Madhaven, 2004).

Surprisingly, no such trend was noted for language performance: pupils who had lost one or both parents performed just as well as the pupils with both parents alive. A possible explanation for this outcome could be the fact that some schools in the sample were implementing the New Break Through to Literacy (NBTL). This programme was introduced by the Ministry of Education in response to low literacy levels at lower primary schools. Under this programme, children start learning in their local languages before being exposed to the English language. However, the programme does not seem to be effective in all circumstances and for all pupils in similar ways (Tambulakani & Bus, in preparation).

Another interesting finding from the data is the observation that children who lost one or both parents were significantly older than the pupils who had both parents alive. This finding is in line with Bicego et al.'s work (2003) where it was found that losing one or both parents is significantly

associated with diminished chances of being at the appropriate grade level for age. It is another indication of the delays in educational performance in pupils who are orphaned by the AIDS pandemic.

Because age is related to Math performance, it was necessary to control for age in the ensuing analysis aimed at testing the association between pupil status and Math. In an analysis of variance with age as covariate the same significant contrasts were found between pupils with both parents alive versus the loss group of pupils for their Math performance and teacher ratings of general intelligence scores.

To verify whether the noted associations between school performance and child status would yield a similar trend for rural versus urban pupils, a multivariate analysis of variance was computed with child status, rural versus urban factors, and school performance indicators as predictors (see Table 4.3.7 for means and standard deviations). As shown above, findings revealed significantly higher school performance of urban pupils. Furthermore, there was a significant interaction between child status and rural versus urban for pupil, with urban pupils with both parents alive outperforming the other pupils in the parental loss group. Similarly, from the contrasts between the math performance of pupils with both parents alive versus the pupils who lost one or both parents, pupils with both parents alive outperformed their peers in the parental loss group regardless of whether they were in rural or urban school. This trend was

especially pronounced in the urban schools on the teacher ratings of general intelligence.

In sum, the central question was whether there would be significant differences in academic performance between pupils who had lost one or both parents and pupils with both parents alive. From the analyses computed above, significant differences were found in performance on the math and teacher ratings of general intelligence with pupils with both parents alive outperforming the others in the parental loss group regardless of the urban/rural dimension of the schools, thus confirming the hypothesis. However, this trend was not the same on the language test, where regardless of status the performance was more or less the same between the two groups in question. As for gender, it did not have a significant effect on performance in language, math and teacher ratings of general intelligence. However, a significant correlation was found between language and Math scores and higher scores on math went with higher teacher ratings of pupils' general intelligence. Age did not significantly correlate with any of the school performance tests. Comparisons between urban and rural pupils on all the school performance tests revealed significant differences in performance, with urban pupils outperforming their rural counterparts regardless of their status –whether orphan or non orphan. A similar trend was noted even when age was controlled for.

A point worth noting is that socio-economic status was not included in the above analyses, which is a serious limitation as the rural versus urban differences show that SES differences might easily account for significant part of the differences between the pupils. Future studies of this nature should include this variable in terms of its effect on academic achievement of the two groups of pupils. Also as already stated above, information on the type of alternative care arrangement for the orphans in this study was also not reliably captured. It appeared to be impossible to get convergent information from different sources (pupil, teacher, parent/caregiver) about the precise care giving and family arrangement in which the pupils who lost one or both parents had to live. Nevertheless, regardless of this factor of alternative arrangement, there was a general delay in performance at school between orphaned and non-orphaned pupils to the disadvantage of those who lost parents. The loss of a parent is a setback for the pupils' progress in the school.

5.4 Associations Between Behaviour Problems, Posttraumatic Stress Symptoms and Academic Achievement

The relations between behaviour problems, dissociation and school performance were also examined. From the findings presented above (chapter 4), none of the stipulated hypotheses were supported. A somewhat unexpected picture emerged:

With the exception of the earlier discussed association between lower teacher ratings of pupils' general intelligence and higher prevalence of behaviour problems as perceived by the teachers, no association was found between dissociation, behaviour problems and school performance. Similarly, there were no large differences in correlations between these main variables and gender. In other words, the correlational structure between problem behaviours, dissociation and school performance were more or less the same for both girls and boys. Urban and rural comparisons also revealed no associations between behaviour problems, dissociation and school performance. The same applied when child loss status was taken into account, indicating no substantial difference in correlations between behaviour problems, dissociation and school performance and pupils who lost one or both parents and those with both parents alive.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

This chapter presents conclusions, recommendations based on the findings and directions for future research.

6.1 On the impact of loss on behaviour problems

Only teachers reported significant gender differences in behaviour. Contrary to expectation, these results showed more internalizing and externalizing, and total problems in girls than boys. As noted above, available literature tends to associate more internalizing problems with girls than boys, and vice versa, i.e., externalizing problems are more common in boys than girls (Keenan & Show, 1997; Stowe et al., 1999). It is argued that such an outcome could be due to the observation that in the Zambian culture, there is more tolerance for younger girls to be loud and a little wild (Kasonde-Ng'andu, 1986; Ngulube, 1989). Societal pressure to behave like a "proper woman" are more pronounced during adolescence.

Teachers also reported more behaviour problems in older pupils and in pupils with lower teacher ratings of pupils' general intelligence. It is speculated that this could be a reflection of older pupils being more

disobedient and more challenging of teachers' authority. Alternatively, it could be associated with adolescents' typical problems. In contrast, caregivers reported more behaviour problems in children who are relatively younger. A possible explanation for this outcome could be due to the fact that in a family setting, the younger children are still being socialized in the rules of that context.

Comparisons of urban against rural reports from the three categories of informants on the behaviour problems revealed that teachers of the rural pupils report fewer problems than their counterparts in the urban sample. On the other hand, caregivers and the children themselves bring out conflicting reports, depicting more behaviour problems than the urban sample. These differences between rural and urban dichotomy are quite substantial. It is argued that a plausible interpretation might be related to the more strict social control in rural areas, leading to more conformity to the social order among children and less tolerance for deviant behaviours.

6.2 On the impact of loss of parents on posttraumatic stress symptoms

Conclusions on the differences in dissociation as measured by the DES between pupils who had experienced loss of one or both parents against the comparison group with both parents alive were that:

There was no correlation between the DES and age of the children, and none with the pupils' language competence as tested by the Pearson correlation. However, it was significantly associated with the pupils' score on the teacher ratings of general intelligence, although with a weak effect size. Maybe the rather complicated DES questions might have been less well understood by the participants with a lower teacher ratings of pupils' general intelligence.

The DES was also not related to gender or to rural-urban residence of pupils. In other words, the hypothesis that rural pupils would have lower scores on the DES because of the emotional support provided by the extended family was not supported in this study. It was argued that because of the high poverty levels in the rural areas, the extended family is likely to be experiencing challenges in executing the caring role of its needy members effectively.

Results from the analysis of variance to test whether children with or without parental loss differed on the DES surprisingly revealed no significant differences. Because of the noted inconsistencies in the data from the various informants on the alternative care arrangement, it is beyond the scope of this study to single out environmental factors that may have positively influenced such an outcome.

6.3 On impact of parental loss on academic performance

Significant differences were found in performance on maths and teacher ratings of general intelligence with pupils with both parents alive outperforming the others in the parental loss group regardless of the rural-urban dimension of the schools. However, this trend was not the same on the language test, where regardless of status, the performance was more or less the same between the two groups in question.

As for gender, it did not have a significant effect on performance in language, maths and teacher ratings of pupils' general intelligence. However, a significant correlation was found between language and math scores and higher scores on maths went with higher teacher ratings of pupils' general intelligence. Age did not significantly correlate with any of the school performance tests.

Comparisons between urban and rural pupils on all the school performance tests revealed significant differences in performance, with urban pupils outperforming their rural counterparts regardless of their status – whether orphan or non orphan. A similar trend was noted even when age was controlled for.

6.4 On correlations between behaviour problems, posttraumatic stress symptoms and academic achievement

A somewhat unexpected picture emerged as follows:

With the exception of the earlier discussed association between lower teacher ratings of pupils' general intelligence and higher prevalence of behaviour problems as perceived by the teachers, no association was found between dissociation, behaviour problems and school performance. Similarly, there were no large differences in correlations between these main variables and gender. In other words, the correlational structure between problem behaviours, dissociation and school performance were more or less the same for both girls and boys. Urban and rural comparisons also revealed no specific associations between behaviour problems, dissociation and school performance. The same applied when child loss status was taken into account, indicating no substantial difference in correlations between behaviour problems, dissociation and school performance and pupils who lost one or both parents and those with both parents alive.

The overall conclusion is that, in this study, the potentially traumatic experience of parental loss did not appear to lead to an increase in problem behaviours automatically and in each and every child. In particular in rural children our hypothesis was refuted, suggesting further

research taking into account the potentially protective factors inherent in the rural child rearing setting. However, orphans did appear to show lower academic achievement, in particular in math. The effects of parental loss on children's development seems much less visible in the socio-emotional domain than in the cognitive domain although the cognitive delays might be explained by socio-emotional interferences of the losses the pupils experienced in a vulnerable period of their lives. Thus, this study documents the surprising socio-emotional resilience of the orphans and at the same time their vulnerability in the cognitive domain. In the Zambian context it seems that orphans need support most in the domain of academic performance. Unfortunately, how this support can be created most effectively cannot be derived from the current study.

6.5 Directions for Further Research

Although a good number of questions in this study were answered, some questions remain unanswered and the results give rise to new questions. A point worth noting is that socio-economic status was not included in the analyses, which is a serious limitation as the rural versus urban differences show that SES differences might easily account for significant part of the differences between the pupils. Future studies of this nature should look at this variable in terms of its effect on performance of the two groups of pupils. In addition, information on the type of alternative care arrangement for the orphans in this study was also not reliably

captured. It appeared to be impossible to get convergent information from different sources (pupil, teacher, parent/caregiver) about the precise care-giving and family arrangement in which the pupils who lost one or both parents had to live.

It should also be mentioned that the measurement artefacts may have been responsible for some of the unexpected and/or theoretically challenging findings of the study. Indeed, the very complex pattern of the data obtained with the CBCL strongly suggests that the instrument was not completely valid and reliable in the context of this study. The data that emerged could be interpreted as showing that, in the population sampled for this study, resilience in the face of parental bereavement is mediated by the availability of a wide range of psychosocially supportive relationships within the child's family, arising from a pattern of attachment formed by children in the course of their early socialization, due to the widespread practice in Zambia (and indeed elsewhere in Africa) of distributing shared responsibility for infant care across multiple caregivers. This pattern is somewhat different from the strongly mother-centered pattern proposed by Bowlby, Ainsworth and other attachment theorists as a cross-cultural universal. This possibility is mentioned in the literature review in chapter two (sections 2.1.1 and 2.3.5), but was not taken into account in the formulation of the leading hypotheses of the study. Hence, one cannot rule out the possibility that the findings not only do not support the leading hypotheses formulated, but are also consistent

with a more culturally relative theory of attachment than the one adopted for this study.

In the Zambian context it seems that orphans need support most in the domain of academic performance. Compensatory academic support is suggested as an important essential strand of public policy because even in the absence of evidence of psychosocial problems in the form of observed behaviour problems and/or pathological signs of psychological dissociation (i.e. disturbances of identity, memory and consciousness), such compensatory interventions can be justified on the grounds that parental loss during the primary school years often gives rise to disruptions of the child's schooling due to loss of income and or relocation of children to different domiciles. Indeed, available literature clearly documents serious school related problems that are faced by orphans (see Chapter two). Unfortunately, how this support can be created most effectively cannot be derived from the current study. Future studies should also systematically take into account the specific alternative caregiving arrangements of the orphans in order to understand protective factors at play. The failure of this study to capture reliable data concerning (i) the socio-economic status of the children's families or (ii) the specific alternative caregiving arrangements following the death of their parents tends to weaken the database available for understanding variations in response to various instruments used. It must be mentioned also that further studies of this nature may have the research instruments

translated into local language in order to ensure that participants really understand issues at hand.

6.6 Recommendations

The Ministry of Education should:

1. institute compensatory academic support to orphaned children in their early years of schooling even in the absence of evidence of psychosocial problems.
2. strengthen its efforts in providing positive support to orphans, especially in the area of psychosocial and educational counseling.
3. put in place ongoing short courses through workshops for teachers on the psychosocial and especially the academic needs of orphans.
4. embark on on-going educational campaigns on the psychosocial and academic needs of orphans targeted at parents/caregivers.

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Appendix 1

PILOT STUDY: TESTING THE FEASIBILITY OF THE DESIGN AND MEASURES

Objective

The main objective of the pilot study was to pre-test the instruments and to look into the feasibility of doing such a study on a larger scale. Hence issues of time, distance, access to parents and costs were also considered.

Sample

The sample consisted of 19 pupils (10 girls and 9 boys), 2 teachers and 19 parents/care givers randomly selected from Ng'ombe Basic School in Lusaka, an urban area. Table 1 below shows the details of their characteristics.

Table 1: Characteristics of Respondents by Gender

	Gender		
Type of Respondents	Male	Female	Total
Teachers	2 (100%)	0 (0.0%)	2 (100%)
Parents/caregivers	7 (35.0%)	13 (65.0%)	20 (100%)
Orphaned pupils	5 (55.6%)	4 (44.4%)	9 (100%)
Non-orphaned pupils	4 (40.0%)	6 (60.0%)	10 (100%)

Table 2: Age of pupils by gender

	Age in years				
Gender	10	11	12	13	Total
Boys	1 (11.1%)	2 (22.2%)	6 (66.7%)	-	9 (100%)
Girls	-	2 (20.0%)	7 (70.0%)	1 (10.0%)	10 (100%)

As table 2 above shows, the majority of the pupils were aged 12 years for both boys and girls.

Table 3: Pupil Status by gender

	Gender		Total
Pupil Status	Boy	Girl	
Mother dead	1 (50.0%)	1 (50.0%)	2 (100%)
Father dead	2 (66.7%)	1 (33.3%)	3 (100%)
Both parents dead	2 (50.0%)	2 (50.0%)	4 (100%)
Both parents alive	4 (40.0%)	6 (60.0%)	10 (100%)
Total	9 (47.4%)	10 (52.6%)	19 (100%)

Table 3 above shows the distribution of the pupils broken down according to status. Among the orphans, the majority had "both parents dead" (4 out of 9), followed by "father dead" (3) and lastly "mother dead" (2).

Measures Used

Below is a description of the measures used to collect the data from the various informants.

(i) **Child Behaviour Checklist (CBCL):** The CBCL (Achenbach, 1991), is 112-item rating scale, consisting of eight subscales, which assesses social competence and behavioural problems. It is normed by gender for children aged 4-18 years. The CBCL is generally considered to provide a comprehensive assessment of most dimensions of psychopathology in children, particularly anxiety and conduct disorders, and has been known to distinguish children with attentive disorders and hyperactivity disorders from normal children (Oesterheld & Haber, 1997).

(ii) **Dissociative Experiences Scale – 11 (DES-11):** DES 11 is a 28-item reliable and valid dissociation scale (Carlson & Putnam, 1993; Van IJzendoorn & Schuengel, 1996; Putnam, 1997). The DES operationalizes dissociation by inquiring about experiences and symptoms, identified by clinicians as central to Dissociation Identity Disorder (DID) and other dissociative conditions.

(iii) **Grade 5 National Assessment (NAG5):** The Examinations Council of Zambia developed the NAG5 to assess grade 5 pupils' knowledge of the school curriculum in different subject areas. In this study two assessments were used: English and Mathematics. These are described below:

(iv) English Test

The NAG5 in English consists of 35 multiple-choice items in which three of the sections require the pupil to read brief paragraphs and then answer 10 questions about each paragraph, while the remaining 5 questions are general linguistic questions. A pupil's total score is the number of items (out of 35) answered correctly.

(v) Mathematics Test

The NAG5 mathematics consists of 45 items assessing pupils' computation and problem solving skills, and a pupil's totals score is the number of items (out of 45) answered correctly.

(vi) The teacher ratings of pupils' general intelligence

The teacher ratings of pupils' general intelligence scores were based on class teacher's records of performance of pupils in previous class tests. However, it was optional for teachers to provide information on this aspect.

Findings

Child Behaviour Checklist

This instrument, which was completed by parents/caregivers and teachers independently sought to assess child behaviour problems. Findings based on problems scores are presented below. We should keep in mind that

the mean scores are based on very few subjects, and any interpretations of differences between sub-groups necessarily remain speculative.

Withdrawal

From the table below (4), the highest mean score on withdrawal based on information from parents/caregivers, is 5.0 (n=2) for pupils who had lost both parents. The mean score for teachers on withdrawal for pupils with both parents dead and mother dead was not computed because n=1.

Table 4: Withdrawal

		Parents			Teachers		
		Sex			Sex		
Status of child	Descriptives	Boy	Girl	Total	Boy	Girl	Total
Mother dead	Mean	.0	.0	.0	.0	6.0	3.0
	Standard Deviation	.	.	.0	.	.	4.2
Father dead	Mean	.0	.0	.0	.0	-	.0
	Standard Deviation	.0	.	.0	.0	-	.0
Both parents	Mean	5.0	.0	2.5	7.0	1.7	3.0
dead	Standard Deviation	4.2	.0	3.8	.	2.1	3.2
Both parents	Mean	.0	.0	.0	.0	1.0	.6
alive	Standard Deviation	.0	.0	.0	.0	1.1	.9
Total	Mean	1.1	.0	.5	.8	1.7	1.3
	Standard Deviation	2.7	.0	1.9	2.3	2.0	2.2

This indicates that pupils with both parents dead and to some extent pupils with mother dead seem to exhibit withdrawal symptoms more than pupils with only father dead and those with both parents alive.

Somatic complaints

Information from parents/caregivers and teachers on somatic complaints does not tally. While teachers' highest mean score on boys with "father dead" was 18.0 (n=2), the score by parents/caregivers was only 2.0 (n=2). On the other hand the mean score for both parents alive was 1.8 (n=5), while for parents/caregivers it was very low (see Table 5).

Table 5: Somatic

		Parents			Teachers		
		Sex			Sex		
Status of child	Descriptives	Boy	Girl	Total	Boy	Girl	Total
Mother dead	Mean	.0	.0	.0	.0	9.0	4.5
	Standard Deviation	.	.	.0	.	.	6.4
Father dead	Mean	2.0	.0	1.3	18.0	-	18.0
	Standard Deviation	.0	.	1.2	12.7	-	12.7
Both parents dead	Mean	1.5	.0	.8	.0	.3	
	Standard Deviation	2.1	.0	1.5	.	.6	
Both parents alive	Mean	1.0	1.3	1.2	1.8	.0	.8
	Standard Deviation	.8	.8	.8	4.0	.0	2.7
Total	Mean	1.2	.8	1.0	5.0	1.0	2.9
	Standard Deviation	1.1	.9	1.0	9.1	2.8	6.7

Anxiety

Information on the manifestation of anxiety disorder differed markedly between parents/caregivers and teachers. The mean score for "both parents alive" was 5.2 (n=6) and for "father dead" it was 5.0 (n=2). Although the sample was extremely small, this seems to indicate that impact of loss of mother for fifth grade children may be more traumatic (see Table 6 below).

Table 6: Anxiety Disorder

Status of child	Descriptives	Parents Sex Boy	Girl	Total	Teachers Sex Boy	Girl	Total
Mother dead	Mean	1.0	.0	.5	3.0	31.0	17.0
	Standard Deviation	.	.	.7	.	.	19.8
Father dead	Mean	1.5	.0	1.0	5.0	-	5.0
	Standard Deviation	.7	.	1.0	1.4	-	1.4
Both parents dead	Mean	5.0	.5	2.8	14.0	8.3	9.8
	Standard Deviation	5.7	.7	4.2	.	3.2	3.9
Both parents alive	Mean	.5	.3	.4	2.2	5.2	3.8
	Standard Deviation	1.0	.5	.7	2.3	3.3	3.2
Total	Mean	1.8	.3	1.0	4.2	8.7	6.6
	Standard Deviation	2.8	.5	2.1	4.2	8.5	7.0

Social Problems

As depicted in Table 7 variation in Social Problems scores is minimal and not discussed here.

Table 7: Social Problems

Status of child	Descriptives	Parents Sex Boy	Girl	Total	Teachers Sex Boy	Girl	Total
Mother dead	Mean	1.0	2.0	1.5	4.0	17.0	10.5
	Standard Deviation	.	.	.7	.	.	9.2
Father dead	Mean	.0	.0	.0	.0	-	.0
	Standard Deviation	.0	.	.0	.0	-	.0
Both parents dead	Mean	5.0	.5	2.8	6.0	1.3	2.5
	Standard Deviation	.0	.7	2.6	.	.6	2.4
Both parents alive	Mean	.5	.0	.2	.0	.5	.3
	Standard Deviation	1.0	.0	.6	.0	.6	.5
Total	Mean	1.4	.3	.8	1.1	2.4	1.8
	Standard Deviation	2.1	.7	1.6	2.3	5.2	4.0

Thought Problems

As shown in Table 2.8 the highest mean scores on manifestation of thought problems were reported by teachers as being 14.0 (n=2) for boys with "father dead" and 3.3 (n=3) for girls with "both parents" dead. The lowest mean score was 1.2 (n=5) for boys with "both parents alive". Responses by parents/caregivers gave no indication of the presence of

thought problems among their children. A possible explanation for this discrepancy between teachers and parents/caregivers responses could be that parents/caregivers do not ordinarily talk about the bad side of their children/dependants freely, especially when it involves strangers. Thought problems may also be more easily observed in the context of school and in efforts to learn.

Table 2.8: Thought Problems

Status of child	Descriptives	Parents Sex			Teachers Sex		
		Boy	Girl	Total	Boy	Girl	Total
Mother dead	Mean	.0	.0	.0	11.0	3.0	7.0
	Standard Deviation	.	.	.0	.	.	5.7
Father dead	Mean	.0	.0	.0	14.0	-	14.0
	Standard Deviation	.0	.	.0	18.4	-	18.4
Both parents dead	Mean	2.5	.0	1.3	2.0	3.3	3.0
	Standard Deviation	3.5	.0	2.5	.	5.8	4.8
Both parents alive	Mean	.0	.0	.0	1.2	.8	1.0
	Standard Deviation	.0	.0	.0	.5	.4	.5
Total	Mean	.6	.0	.3	5.2	1.8	3.4
	Standard Deviation	1.7	.0	1.2	8.8	3.0	6.5

Attention Problems

As depicted in Table 9 below parents did not report much attention problems.

Table 9: Attention Problems

Status of child	Descriptives	Parents Sex			Teachers Sex		
		Boy	Girl	Total	Boy	Girl	Total
Mother dead	Mean	1.0	2.0	1.5	6.0	17.0	11.5
	Standard Deviation	.	.	.7	.	.	7.8
Father dead	Mean	1.5	.0	1.0	.0	-	.0
	Standard Deviation	.7	.	1.0	.0	-	.0
Both parents dead	Mean	5.0	.5	2.8	16.0	.7	4.5
	Standard Deviation	1.4	.7	2.8	.	.6	7.7
Both parents alive	Mean	1.0	.3	.6	.40	2.3	1.5
	Standard Deviation	1.2	.5	.8	.6	2.7	2.2
Total	Mean	2.0	.5	1.2	2.7	3.3	3.0
	Standard Deviation	1.9	.7	1.6	5.4	5.3	5.2

The mean scores of parents/caregivers were comparatively much lower than those of teachers. To this effect, the highest mean score by parents/caregivers was 5.0 (n=2) for boys with "both parents dead" whereas the highest mean score of teachers was 17.0 for girls with mother dead. This seems to indicate that, though the sample was too small to make meaningful conclusions, teachers notice attention problems more than parents/caregivers, probably because classroom work demands more of the pupils' attention.

Delinquency

Scores on symptoms of delinquency among pupils were generally low or non-existent in the ratings of both parents/caregivers and teachers. The highest mean score was 3.0 for boys with "both parents dead" (n=2) according to the responses by parents/caregivers, whereas teachers provided a mean score of 4.0 for the same sub-group of pupils, as can be seen in Table 10 below.

Table 10: Delinquency

Status of child	Descriptives	Parents Sex			Teachers Sex		
		Boy	Girl	Total	Boy	Girl	Total
Mother dead	Mean	.0	.0	.0	2.0	3.0	2.5
	Standard Deviation	.	.	.0	.	.	.7
Father dead	Mean	.0	.0	.0	1.0	-	1.0
	Standard Deviation	.0	.	.0	.0	-	.0
Both parents dead	Mean	3.0	.0	1.5	4.0	2.0	2.5
	Standard Deviation	2.8	.0	2.4	.	1.0	1.3
Both parents alive	Mean	.0	.0	.0	.0	.2	.1
	Standard Deviation	.0	.0	.0	.0	.4	.3
Total	Mean	.7	.0	.3	.9	1.0	1.0
	Standard Deviation	1.7	.0	1.2	1.4	1.3	1.3

Aggression

Reports on signs of aggression among pupils by parents/caregivers and teachers differed markedly as depicted in Table 11 below.

Table 11: Aggression

Status of child	Descriptives	Parents Sex			Teachers Sex		
		Boy	Girl	Total	Boy	Girl	Total
Mother dead	Mean	.0	.0	.0	28.0	21.0	24.5
	Standard Deviation	.	.	.0	.	.	5.0
Father dead	Mean	1.5	.0	1.0	8.0	-	8.0
	Standard Deviation	.7	.	1.0	9.9	-	9.9
Both parents dead	Mean	4.5	.0	2.3	4.0	4.7	4.5
	Standard Deviation	5.0	.0	3.9	.	7.2	5.9
Both parents alive	Mean	.5	.3	.4	1.8	3.5	2.7
	Standard Deviation	1.0	.5	.7	4.0	3.8	3.8
Total	Mean	1.6	.2	.8	6.3	5.6	6.0
	Standard Deviation	2.6	.4	1.9	9.7	7.0	8.1

The highest mean scores throughout the status categories were as follows: 8.0 (n=2) for boys with "father dead", 4.7 (n=3) for girls with "both parents dead" and 3.5 (n=6) for girls with "both parents alive". The other categories only contained one respondent.

2.4.1.9 Internalizing Problems

As presented in Table 2.12 below, mean scores on internalizing problems between parents/caregivers and teachers generally differed widely. Teachers gave the highest scores as being: 6.7 (n=6) for girls with "both parents alive" and 5.0 (n=2) for boys with "father dead". On the other hand, parents/caregivers were clearly in agreement with teachers only on the mean score for boys with "both parents dead", which was 11.0 (n=2). This seems to indicate that internalizing problems are likely to be

commonly perceived among children with both parents dead. Further correlational analyses would be necessary in order to test this suggestion but evidently the pilot sample is too small for these analyses.

Table 2.12: Internalizing Problems

		Parents			Teachers		
		Sex			Sex		
Status of child	Descriptives	Boy	Girl	Total	Boy	Girl	Total
Mother dead	Mean	1.0	.0	.5	7.0	54.0	30.5
	Standard Deviation	.	.	.7	.	.	33.2
Father dead	Mean	3.5	.0	2.3	5.0	-	5.0
	Standard Deviation	.7	.	2.1	1.4	-	1.4
Both parents	Mean	11.0	.5	5.8	26.0	11.0	14.8
dead	Standard Deviation	11.3	.7	8.9	.	2.7	7.8
Both parents	Mean	1.5	1.7	1.6	2.2	6.7	4.6
alive	Standard Deviation	1.7	1.2	1.4	2.3	2.9	3.4
Total	Mean	4.0	1.1	2.5	6.0	12.7	9.5
	Standard Deviation	5.8	1.2	4.2	7.9	14.9	12.3

2.4.1.10 Externalizing Problems

As depicted in Table 2.13, mean scores on manifestation of symptoms of externalizing problems between parents/caregivers and teachers were also markedly different. Teachers generally recorded the highest scores for the following sub-groups: 9.0 (n=2) for boys with "father dead", 6.7 (n=3) for girls with "both parents dead" and 3.7 (n=6) for girls with "both parents alive". This seems to indicate that, though based on a small sample, externalizing problems are likely to be noticed among children with "both parents dead".

Table 2.13: Externalizing Problems

Status of child	Descriptives	Parents Sex Boy	Girl	Total	Teachers Sex Boy	Girl	Total
Mother dead	Mean	.0	.0	.0	30.0	24.0	27.0
	Standard Deviation	.	.	.0	.	.	4.2
Father dead	Mean	1.50	.0	1.0	9.0	-	9.0
	Standard Deviation	.7	.	1.0	9.9	-	9.9
Both parents dead	Mean	7.5	.0	3.8	8.0	6.7	7.0
	Standard Deviation	7.8	.0	6.2	.	8.1	6.7
Both parents alive	Mean	.5	.3	.4	1.8	3.7	2.8
	Standard Deviation	1.0	.5	.7	4.0	3.7	3.8
Total	Mean	2.2	.2	1.2	7.2	6.6	6.9
	Standard Deviation	4.2	.4	3.0	10.2	7.9	8.8

2.4.1.11 Total Problem Score

Table 2.14 below shows that there were rather large differences between parents/caregivers and teachers on total problem scores. Teachers generally gave higher scores: 24.0 (n=3) for girls with "both parents dead" and 19.0 (n=6) for girls. Parents/caregivers were scoring somewhat higher only in case of boys with "both parents dead" who received a total mean score of 11.0 (n=2). This, as noted elsewhere, could be an indication that children with both parents dead are likely to display more psycho-social problems.

In summary the results supported the applicability of the overall measurement behaviour problems through the CBCL in the envisaged study in the Zambian context. In other words the results seemed to suggest that the CBCL would be applicable to the main study. However, it

should be noted that teachers and parents generally found the items long and repetitive. The children also completed the self-report CBCL (results have not been presented due to the small sample size). Although none of the children openly echoed the above concerns about length and repetitiveness of the items, they did manifest signs of being bored and tired by completing the CBCL. Others were of the view that some items were not in line with the Zambian culture. For example on the CBCL items 59, 60 and 96 read as follows: "Plays with own sex parts in public"; Plays with own sex parts too much; and "Thinks about sex too much". Another problem was that administration of the CBCL instruments took too long (on average two to three hours) because of the thorough explanations that the research team had to give, indicating that some items were difficult to understand for the respondents. It might be argued that translation of the items in the local languages would have solved this problem. However, due to the time constraint this was not possible.

Table 2.14: Total Problems

		Parents			Teachers		
		Sex			Sex		
Status of child	Descriptives	Boy	Girl	Total	Boy	Girl	Total
Mother dead	Mean	2.0	3.0	2.5	56.0	104.0	80.0
	Standard Deviation	.	.	.7	.	.	33.9
Father dead	Mean	8.5	.0	5.7	51.0	-	51.0
	Standard Deviation	3.5	.	5.5	4.2	-	4.2
Both parents dead	Mean	37.0	1.5	19.3	50.0	24.0	30.5
	Standard Deviation	29.7	.7	26.7	.	19.1	20.3
Both parents alive	Mean	6.0	2.7	4.0	12.8	19.0	16.2
	Standard Deviation	4.6	2.7	3.7	9.3	9.5	9.5
Total	Mean	13.0	2.2	7.3	30.2	29.0	29.6
	Standard Deviation	17.6	2.2	13.0	21.8	28.8	25.0

2.5 Child Dissociation

The instrument to measure child dissociation revealed no differences among the different pupil status. The highest mean scores as reported by parents/caregivers were 2.0 (n=2) for boys with "father dead", 2.0 (n=3) for girls with "both parents dead" and 1.5 (n=4) for boys and 1.6 (n=5) for girls with "both parents alive". In other words, the differences in child dissociation were not large probably because the sample was too small and because the variation in responses was restricted in this specific pilot sample.

Table 2.15: Child Dissociation

	Boy		Girl		Total	
Pupil status	M	Std	M	Std	M	Std
Mother dead	1.0		2.0		1.5	.7
Father dead	2.0	2.8	.0		1.3	2.3
Both parents dead	1.0	1.4	2.0	1.7	1.6	1.5
Both parents alive	1.5	1.7	1.6	2.2	1.5	1.6
Total	1.4	1.6	1.6	1.8	1.5	1.7

2.6 The Dissociative Experiences Scale

An attempt to measure the effects of trauma on children using the DES proved difficult because both the pupils and researchers could not handle the response categories which were in percentage form. It is unusual for Zambian children and even adults to accurately estimate their experiences on a rating scale consisting of percentages. The commonly used estimates are: "often", "always", "sometimes" or "rarely". This means that for the main study the responses to the items in DES II instrument should

be changed from percentages to "not true", "somewhat true" or "sometimes true" and "very true" or "often true".

2.7 Mathematics and English Assessment

From Tables 2.16 and 2.17 it can be derived that pupil performance in Mathematics and English was generally poor. Only a few pupils with "both parents alive" managed to score means of 22.5 (n=4) for boys and 18.5 (n=6) for girls in Mathematics and 16.7 (n=4) for boys and 10.3 (n=6) for girls in English. This picture seems to be in line with the Zambia National Assessment report (MOE, 1999). It should be mentioned that although this assessment was designed for Zambian pupils in grade 5, children in Zambia have been under performing on this assessment (Kelly & Kanyika, 2000).

Table 2.16: Mathematics Assessment

	Boy		Girl		Total	
Pupil status	M	Std	M	Std	M	Std
Mother dead	20.0		7.0		13.5	9.2
Father dead	11.0	1.4	20.0		14.0	5.3
Both parents dead	17.0	5.7	17.0	4.2	17.0	4.1
Both parents alive	22.5	5.7	18.5	5.9	20.1	5.9
Total	18.4	6.3	17.2	5.9	17.8	5.9

Table 2.17: English Assessment

	Boy		Girl		Total	
Pupil status	M	Std	M	Std	M	Std
Mother dead	10.0		10.0		10.0	
Father dead	8.5	2.1	9.0		8.7	1.5
Both parents dead	5.0	4.2	11.0	1.4	8.0	4.3
Both parents alive	16.8	10.0	10.3	8.2	12.9	9.1
Total	11.6	8.2	10.3	6.2	10.9	7.0

2.8 Orphans' Experiences

In order to have a feel of the type of life orphans were leading, an instrument was designed specifically targeted at parents/caregivers and orphans themselves. However, it was not possible to interview the orphans during the pilot study because this instrument was designed towards the end of the field work. Hence the findings that are presented below are based on the parents/caregivers of the orphans only. It will be necessary during the main study to interview the children themselves. The questions sought to find out who was taking care of the orphans. All the children were being looked after by older siblings (elder brothers or sisters) and uncles.

2.9 The Impact of Trauma and Age

Available literature indicates that there is a relation between the impact of trauma and the age at which it occurs. Hence an attempt was made to find out the age of the child at the time of death of parent(s). Two children, a male and a female, lost their father when they were between 0-2 years and 3-5 years respectively, while another two females lost their mother when they were between 9 and 11 years old.

In the case of six children the parents/caregivers could not tell the age of the child as at the time of death of father, mother or both. In the case of

4 children who had both parents dead the parents/caregivers could not tell the age of the children at the time of the death of parents occurred.

2.10 Sudden Death of the Parent(s)

An attempt was made to find out whether the death of the parent(s) was sudden or expected and the explanation for the death. One father's death was sudden as a result of cholera. Another father died after being sick for a month.

2.11 Relationship Between the Pupil and the Parent(s)

Because the quality of the relationship is likely to have a bearing on ones' response to death of parent(s), a question was posed to find out the relationship between the pupil and the parent(s) before he/she died. All the parents/caregivers except one who could not tell, reported a very good relationship.

2.12 Child's Current Feelings/Thoughts About the Deceased

An attempt was also made to explore the child's current feelings/thoughts about the deceased. From the responses of parents/caregivers, three children, one with "father dead", one with "mother dead" and another with "both parents dead" were said to be very distressed. Two children with "both parents dead" were also described as being distressed, while one with "mother dead" was said to be not distressed. In the case of two children, the respondents could not tell.

2.13 Orphans' Siblings, both Alive and Dead

An attempt was also made to obtain information on the orphans' siblings, both alive and dead. The idea was to find out the type of family life the orphans were experiencing, including the experiences of death of any of their siblings. Orphans had siblings who were alive. As for the number of dead siblings and the age of the orphans when they died the following emerged: one lost a sibling when he was 13 years, one girl lost three siblings by the time she was 11 years, four lost siblings by the time they were 12 years.

2.14 Type of Care Provided to the Orphan

A question was also asked on the type of care provided to the orphan by the caregiver. From the responses, all the caregivers said they provided emotional, financial and material support.

2.15 Involvement of Parents/Caregivers in the Pupil's Education

Caregivers were also asked their involvement in the children's education. The majority of them (6 out of 9) said they somehow got involved in the children's education in the form of helping with homework and showing interest in school programmes.

As for the two caregivers who never got involved in the children's education, the reason was lack of time since they went for work outside the home.

2.16 Whom the pupil talks to about school related problems

The caregivers were also asked with whom the pupil chose to talk to when faced with a problem at school. Five out of nine said the pupil talked to them (parent/caregiver). Three of them said they felt comfortable confiding in siblings while one of them said the pupil chose to talk to an uncle when faced with a problem at school.

2.17 Whom the Pupil Talks To About Fights With Classmates

Parents/caregivers were also asked with whom the pupil talked to if he/she had a fight with a classmate. The majority of the respondents, five out of nine said the pupil would choose to talk to the parent/caregivers when faced with such a problem, followed by three who mentioned siblings, and one who mentioned an uncle.

2.18 Whom the Pupil Talks To When Upset

Because having someone to confide in when you are feeling upset or down is important from a psychological perspective, parents/caregivers were asked whom the pupil talked to when he/she was upset or down. Siblings were mentioned by the majority of parents/caregivers (six out of

nine) as being the ones the pupil would talk to when faced with such a problem.

2.19 Whom the Pupil Feels Comfortable With

Parents/caregivers were also asked with whom they thought the pupil felt comfortable or at ease. The responses were quite varied, with "aunt" and "siblings" having the highest frequency (three out of nine each), followed by parent/caregivers (2) and uncle (1). From the responses, it would appear that all the orphans in this study had somebody they felt happy and at ease with.

2.20 Views on Whether Orphans Suffer a Lot

A general question was asked to find out the views of parents/caregivers on whether they felt orphans suffer a lot. Almost half of them (four out of nine) said yes *"they have a lot to think about",* while two of them said no *"they are just the same as other children",* and one parent/caregiver said *"the type of care orphans receive depends on whom they stay with".* Two of the respondents did not respond to the question.

2.21 Suggestion for Improving the Orphans' Well-being

The parents/caregivers were asked to suggest ways to improve the well-being of orphans and the following emerged: *"provide them with education"* (four out of nine), *"give them equal treatment/opportunity"* (3), *"need support from organisations to make ends meet"* (1) and "*have*

day community orphanage where orphans can mix freely with non-orphans" (1). From the pattern of responses, most parents/caregivers feel orphans need assistance in the area of education. Though the sample is small, such sentiments support available literature, which indicates that orphans are more likely to be out of school than their non-orphans counterparts.

2.22 Conclusion and Recommendations

This study sought to pre-test instruments and to look into the practicality of doing a study on a larger scale. Based on the findings from the field, the following suggestions were recommended to be considered in the main study.

1. The sample should be enlarged considerably in order to capture the real differences between orphans and non-orphans. The initial plan was to have a sample of 20 children per school (10 orphans and another 10 non-orphans) in 10 schools in each of the provinces. This would have meant covering 400 pupils altogether. Based on the pilot study experience, it was recommended that the sample should be doubled to cover 800 children.

2. The questionnaire on pupil experiences should also be answered by the pupils themselves, who are the ones who know how it really feels, and not the parents/caregivers only.

3. The responses to the items in DES II instrument should be changed from percentages to "not true", "somewhat" or "sometimes true" and "very true" or "often true" because Zambian children and even adults do not ordinarily talk about experiences in percentages.

4. The title of the study as printed on the questionnaires should be changed from "The Effects of Loss of Parents on Academic Performance and
Psycho-social Adjustment of Grade Five Children in Zambia" to "Academic Performance and Psycho-social Adjustment of Grade Five Children in Zambia" to avoid possible bias by teachers and parents/caregivers.

5. Following parents/caregivers to their homes for interviews proved very difficult due to the unsystematic way the houses are located. While it is more desirable to interview parents in their own homes, the pilot experience seemed to suggest that for the main study it would be more practical to invite parents to the school for interviews.

Appendix 2

ID

THE UNIVERSITY OF ZAMBIA
DEPT. OF EDUCATIONAL PSYCHOLOGY,
SOCIOLOGY AND SPECIAL EDUCATION
SCHOOL OF EDUCATION

ACADEMIC PERFORMANCE AND PSYCHO-SOCIAL ADJUSTMENT OF GRADE FIVE CHILDREN IN ZAMBIA

TEACHER QUESTIONNAIRE

TEACHER'S REPORT FORM FOR AGES 6 - 18

Your answers will be used to compare the pupil with other pupils whose teachers have completed similar forms. The information form this form will also be used for comparison with other information about this pupil. Please answer as well as you can, even if you lack full information. Scores on individual items will be combined to identify general patterns of behaviour. Feel free to print additional comments beside each item and in the spaces provided.

BACKGROUND INFORMATION

Name of Province: _____

Name of District: _____

Name of School: _____

PART A: Pupil Data

Pupils Status:

(a) Father dead ☐

(b) Mother dead ☐

(c) Both parents dead ☐

(d) Both parents alive ☐

Who looks after child?

(a) Elder sister ☐

(b) Elder Brother ☐

(c) Step father ☐

(d) Step mother ☐

(e) Uncle ☐

(f) Aunt ☐

(g) Grandfather ☐

(h) Grandmother ☐

(i) Other (specify) _____

Pupils :

(a) First Name _____

(b) Middle Name _____

(c) Last Name _____

Gender

(a) Boy ☐

(b) Girl ☐

Age _____

Ethnic group or race _____

Pupil's Birth date: (a) Month _____

(b) Day _____

(c) Year _____

Grade in School: Grade 5 ☐

Parent's usual type of work (even if not working now)

(please be specific – e.g. Auto mechanic, high school teacher, homemaker, labourer, lathe operator, shoe salesman, army sergeant)

(a) Father's type of work _____

(b) Mother's type of work _____

PART B: Teacher Data

Your name _____

Your gender (a) Male ☐

(b) Female ☐

Education level attained

(a) Grade 12

(b) Certificate Primary

(c) Diploma Primary

(d) Degree

Your role at the school

(a) Classroom teacher ☐

(b) Counsellor ☐

(c) Teacher's aide ☐

(d) Special educator ☐

(e) Administrator ☐

(f) Other (please specify) _____

1. For how many months have you known this pupil? ☐☐

2. How well do you know him/her?

   (a) Not well ☐

   (b) Moderately well ☐

   (c) Very well ☐

3. How much time does he/she spend in your class or service per week?

   _____

4. What kind of class or service is it? *(please be specific, e.g. regular 5th grade, 7th grade math, learning disability, counselling, etc)*

   _____

5. Has he/she ever been referred for special class placement, services or tutoring?

   (a) Don't know ☐

   (b) No ☐

   (c) Yes ☐

   If Yes, (i) What kind? _____

   (ii) When? _____

6. Has he/she ever repeated any grade?

   (a) Don't know ☐

   (b) No ☐

   (c) Yes ☐

   If Yes, (i) What grades?

   _____

   (ii) What were the reasons?

   _____

   _____

   _____

7(a). Current academic performance – *list academic subjects and check box that indicates pupil's performance for each subject. (tick ☑ the appropriate performance level)*

	Academic subject	**Pupil's performance**				
		Far below grade	Somewh at below grade	At grade level	Somewhat above grade level	Far above grade
1						
2						
3						
4						
5						
6						

7(b). Below is a list of items that describe pupils. For each item that describes the pupil *now or within the past 2 months*, please tick ***2*** if the item is *very true or often true* of the pupil. Tick ***1*** if the item is *somewhat or sometimes true* of the pupil. If the item is *not true* of the pupil, tick ***0***. Please answer all items as well as you can, even if some do not seem to apply to this pupil.

	Item	**Description**		
		0	**1**	**2**
		Not true	Somewhat or sometime s true	Very true or often true
1.	Acts too young for his/her age			
2.	Hums or makes other odd noises in class			
3.	Argues a lot			
4.	Fails to finish things he/she starts			
5.	There is very little he/she enjoys			
6.	Defiant, talks back to staff			
7.	Bragging, boasting			
8.	Can't concentrate, can't pay attention for long			

	Item	Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
10.	Can't sit still, restless, or hyperactive			
11.	Clings to adults or too dependent			
12.	Complains of loneliness			
13.	Confused or seems to be in a fog			
14.	Cries a lot			
15.	Fidgets –unable to remain still or quiet			
16.	Cruelty, bullying, or meanness to others			
17.	Day dreams or gets lost in his/her thoughts			
18.	Deliberately harms self or attempts suicide			
19.	Demands a lot of attention			
20.	Destroys his/her own things			
21.	Destroys property belonging to others			
22.	Difficulty following directions			
23.	Disobedient at school			
24.	Disturbs other pupils			
25.	Doesn't get along with other pupils			
26.	Doesn't seem to feel guilty after misbehaving			
27.	Easily jealousy			
28.	Breaks school rules			
29.	Fears certain animals, situations, or places, other than school (describe) _____ _____			
30.	Fears going to school			
31.	Fears he/she might think or do something bad			
32.	Feels he/she has to be perfect			
33.	Feels or complains that no one loves him/her			
34.	Feels others are out to get him/her			
35.	Feels worthless or inferior			
36.	Gets hurt a lot, accident-prone			
37.	Gets in may fights			
38.	Gets teased a lot			
39.	Hangs around with others who get in trouble			
40.	Hears sound or voices that aren't there			
41.	Impulsive or acts without thinking			
42.	Would rather be alone than with others			
43.	Lying or cheating			
44.	Bites finger nails			
45.	Nervous, high-strung, or tense			
46.	Nervous movements or twitching (describe) _____ _____			
47.	Over conforms to rules			

	Item	Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
48.	Not liked by other pupils			
49.	Has difficulty learning			
50.	Too fearful or anxious			
51.	Feels dizzy or light headed			
52.	Feels too guilty			
53.	Talks out of turn			
54.	Overtired without good reason			
55.	Overweight			
56(a).	Physical problems ***without known medical cause:*** Aches or pains (*not* stomach or headaches)			
56(b).	Physical problems ***without known medical cause:*** Headaches			
56(c).	Physical problems ***without known medical cause:*** Nausea, feels sick			
56(d).	Physical problems ***without known medical cause:*** Eye problems (***not*** if corrected by glasses) (describe) _____ _____ _____ _____ _____			
56(e).	Physical problems ***without known medical cause:*** Rashes or other skin problems			
56(f).	Physical problems ***without known medical cause:*** Stomach-aches			
56(g).	Physical problems ***without known medical cause:*** Vomiting, throwing up			
56(h).	Physical problems ***without known medical cause:*** Other (describe) _____ _____			
57.	Physically attacks people			
58.	Picks nose, skin, or other parts of body (describe) _____ _____			

	Item	Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
59.	Sleeps in class			
60.	Apathetic or unmotivated			
61.	Poor school work			
62.	Poorly coordinated or clumsy			
63.	Prefers being with elder children or youths			
64.	Prefers being with younger children			
65.	Refuses to talk			
66.	Repeats certain acts over and over; compulsions (describe) _____ _____			
67.	Disrupts class discipline			
68.	Screams a lot			
69.	Secretive, keeps things to self			
70.	Sees things that aren't there (Describe) _____ _____ _____			
71.	Self conscious or easily embarrassed			
72.	Messy work			
73.	Behaves irresponsibly (describe) _____ _____ _____			
74.	Showing off or clowning			
75.	Too shy or timid			
76.	Explosive or unpredictable behaviour			
77.	Demands must be met immediately, easily frustrated			
78.	Inattentive or easily distracted			
79.	Speech problem (describe) _____ _____ _____ _____			

	Item	Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
80.	Stares blankly			
81.	Feels hurt when criticised			
82.	Steals			
83.	Stores up too many things he/she doesn't need (describe) _____ _____ _____ _____			
84.	Strange behaviour (describe) _____ _____ _____ _____			
85.	Strange ideas (describe) _____ _____ _____ _____			
86.	Stubborn, sullen, or irritable			
87.	Sudden changes in mood or feelings			
88.	Sulks a lot			
89.	Suspicious			
90.	Swearing or obscene language			
91.	Talks about killing self			
92.	Underachieving, not working up to potential			
93.	Talks too much			
94.	Teases a lot			
95.	Temper tantrums or hot temper			
96.	Seems pre-occupied with sex			
97.	Threatens people			
98.	Tardy to school or class			
99.	Smokes, chews, or sniffs tobacco			
100.	Fails to carry out assigned tasks			
101.	Truancy or unexplained absence			

	Item	Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
102.	Under active, slow moving, or lacks energy			
103.	Unhappy, sad, or depressed			
104.	Unusually loud			
105.	Uses drugs for nonmedical purposes (***don't*** include tobacco) (describe) _____ _____ _____ _____			
106.	Overly anxious to please			
107.	Dislikes school			
108.	Is afraid of making mistakes			
109.	Whining			
110.	Unclean personal appearance			
111.	Withdrawn, doesn't get involved with others			
112.	Worries			
113.	Please write in any problems the pupil has that were not listed above. _____ _____ _____			

8. Compared to typical pupils of the same age:

	Item	Score						
		1	2	3	4	5	6	7
		Much less	Somewhat less	Slightly less	About average	Slightly more	Somewhat more	Much more
1.	How hard is he/she working?							
2.	How appropriate is he/she behaving?							
3.	How much is he/she learning?							
4.	How happy is he/she?							

9. Most recent achievement test scores (optional):

Name of test	Subject	Date	Grade level obtained		
			Below average	Average	Above average

10. teacher ratings of pupils' general intelligence, readiness or aptitude tests (optional)

Name of test	Date	Teacher ratings of pupils' general intelligence or equivalent scores		
		Below average	Average	Above average

11. Does this pupil have any illness or disability (either physical or mental)?

(a) No ☐

(b) Yes ☐

If Yes, please describe

_____

12. What concerns (worries) you most about this pupil?

_____

_____

_____

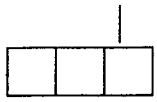
13. Please describe the best things about this pupil.

_____

_____

_____

14. Should you have extra comments about this pupil's work, behaviour, or potential, please fell free to write in the space below.



Appendix 3

THE UNIVERSITY OF ZAMBIA
DEPT. OF EDUCATIONAL PSYCHOLOGY,
SOCIOLOGY AND SPECIAL EDUCATION
SCHOOL OF EDUCATION

ACADEMIC PERFORMANCE AND PSYCHO-SOCIAL ADJUSTMENT OF GRADE FIVE CHILDREN IN ZAMBIA

PARENT/GUARDIAN QUESTIONNAIRE

CHILD BEHAVIOUR CHECKLIST FOR AGES 6 - 18

Your answers will be used to compare the pupil with other pupils whose teachers have completed similar forms. The information form this form will also be used for comparison with other information about this pupil. Please answer as well as you can, even if you lack full information. Scores on individual items will be combined to identify general patterns of behaviour. Feel free to print additional comments beside each item and in the spaces provided.

BACKGROUND INFORMATION

Name of Province: _____

Name of District: _____

Name of School: _____

PART A: Pupil Data

Pupils Status:

(a) Father dead ☐

(b) Mother dead ☐

(c) Both parents dead ☐

(d) Both parents alive ☐

Who looks after child?

(a) Elder sister ☐

(b) Elder Brother ☐

(c) Step father ☐

(d) Step mother ☐

(e) Uncle ☐

(f) Aunt ☐

(g) Grandfather ☐

(h) Grandmother ☐

(i) Other (specify) _____

Pupils :

(a) First Name _____

(d) Middle Name _____

(e) Last Name _____

Gender

(a) Boy ☐ (b) Girl ☐

Age _____

Ethnic group or race _____

Pupil's Birth date: (a) Month _____

(b) Day _____

(c) Year _____

Grade in School Grade 5 ☐

Name and address of school _____

Not attending school ☐

Parent's usual type of work (even if not working now)

(please be specific – e.g. Auto mechanic, high school teacher, homemaker, labourer, lathe operator, shoe salesman, army sergeant)

(a) Father's type of work _____

(b) Mother's type of work _____

PART B: Parent/Guardian Data

Your name _____

Your gender (a) Male ☐ (b) Female ☐

Education level attained

(a) None

(b) Primary

(c) Secondary

(d) College

(e) University

(f) Other (please specify)

_____

Your relation to the child

(a) Biological parent ☐

(b) Step father ☐

(c) Step mother ☐

(d) Grandfather ☐

(e) Grandmother ☐

(f) Elder brother ☐

(g) Elder sister ☐

(h) Uncle ☐

(i) Aunt ☐

1. Please list the sports your child likes to take part in. (*e.g. swimming, baseball, skating, skate boarding, bike riding, fishing, etc)*

	Name of sport	**Compared to others of the same age, about how much time does he/she spend in each?**				**Compared to others of the same age, how well does he/she do in each one?**			
		Less than average	Average	More than average	Don't know	Below average	Average	Above average	Don't know
a.	None								
b.									
c.									
d.									

2. Please list your child's favourite hobbies, activities, and games, other than sports: e.*g. stamps, dolls, books, piano, crafts, cars, computers, singing, etc.* (do not include listening to radio or TV).

	Name of sport	**Compared to others of the same age, about how much time does he/she spend in each?**				**Compared to others of the same age, how well does he/she do in each one?**			
		Less than average	Average	More than average	Don't know	Below average	Average	Above average	Don't know
a.	None								
b.									
c.									
d.									

3. Please list any organisations, clubs, teams, or groups your child belongs to.

	Name of organisations/clubs	Compared to others of the same age, how active is he/she in each?			
		Less active	Average	Above average	Don't know
a.	None				
b.					
c.					

4. Please list any jobs or chores your child has. *For example: paper route, babysitting, making bed, working in store, etc. (Include both paid and unpaid jobs and chores)*

	Jobs or chores	Compared to others of the same age, how well does he/she carry them out?			
		Below average	Average	Above average	Don't know
a.	None				
b.					
c.					

5(i). About how many close friends does your child have? *(do not include brothers and sisters)*

(a) None

(b) 1

(c) 2 or 3

(d) 4 or more

5(ii) About how many times a week does your child do things with any friend outside of regular school hours? *(do not include brothers and sisters)*

(a) Less than 1

(b) 1 or 2

(c) 3 or more

6. Compared to others of his/her age, how well does your child:

(i) Get along with his/her brothers and sisters?

(a) Has no brothers and sisters ☐

(b) Worse ☐

(c) Average ☐

(d) Better ☐

(e) Other family members (specify) _____

(ii) Get along with other kids?

(a) Worse ☐

(b) Average ☐

(c) Better ☐

(iii) Behave with his/her parents?

(a) Worse ☐

(b) Average ☐

(c) Better ☐

(iv) Play and work alone?

(a) Worse ☐

(b) Average ☐

(c) Better ☐

7. (a) (i) Performance in academic subjects.

	Subject	Failing	Below average	Average	Above average
a.	Reading, English or Language Arts				
b.	History or social studies				
.c.	Arithmetic or Math				
d.	Science				
e.					
f.					
g.					

(ii) Does your child receive any special education or remedial services

or attend a special class or special school?

(a) No ☐

(b) Yes ☐

If Yes, kind of services, class, or school

_____

(iii) Has your child repeated any grades?

(a) No ☐

(b) Yes ☐

If Yes, (a) Grades

_____

(b) Reasons

_____

(iv) Has your child had any academic or other problems in school?

(a) No ☐

(b) Yes ☐

If Yes, please describe

_____

When did these problems start? _____

Have these problems ended?

(a) No ☐

(b) Yes ☐

If Yes, when? _____

Does your child have any illness or disability (either physical or mental)?

(a) No ☐

(b) Yes ☐

If Yes, please describe _____

What concerns (worries) you most about your child?

_____

_____

_____

Please describe the best things about your child.

_____

_____

_____

7(b). Below is a list of items that describe pupils. For each item that describes the pupil *now or within the past 2 months*, please tick ***2*** if the item is *very true or often true* of the pupil. Tick ***1*** if the item is *somewhat or sometimes true* of the pupil. If the item is *not true* of the pupil, tick ***0***. Please answer all items as well as you can, even if some do not seem to apply to this pupil.

	Item	Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
1.	Acts too young for his/her age			
2.	Drinks alcohol without parents' approval (describe) _____ _____ _____			
3.	Argues a lot			
4.	Fails to finish things he/she starts			
5.	There is very little he/she enjoys			
6.	Bowel movements outside toilet			
7.	Bragging, boasting			
8.	Can't concentrate, can't pay attention for long			
9.	Can't get his/her mind off certain thoughts; obsessions (describe) _____			
10.	Can't sit still, restless, or hyperactive			
11.	Clings to adults or too dependent			
12.	Complains of loneliness			
13.	Confused or seems to be in a fog			
14.	Cries a lot			
15.	Cruel to animals			
16.	Cruelty, bullying, or meanness to others			
17.	Day dreams or gets lost in his/her thoughts			
18.	Deliberately harms self or attempts suicide			
19.	Demands a lot of attention			
20.	Destroys his/her own things			
21.	Destroys property belonging to others			
22.	Disobedient at home			
23.	Disobedient at school			
24.	Doesn't eat well			
25.	Doesn't get along with other kids			
26.	Doesn't seem to feel guilty after misbehaving			
27.	Easily jealousy			
28.	Breaks rules at home, school, or elsewhere			
29.	Fears certain animals, situations, or places,			

	other than school (describe) _____ _____ _____			
30.	Fears going to school			
31.	Fears he/she might think or do something bad			
32.	Feels he/she has to be perfect			
33.	Feels or complains that no one loves him/her			
34.	Feels others are out to get him/her			
35.	Feels worthless or inferior			
36.	Gets hurt a lot, accident-prone			
37.	Gets in may fights			
38.	Gets teased a lot			
39.	Hangs around with others who get in trouble			
40.	Hears sound or voices that aren't there _____ _____ _____			
41.	Impulsive or acts without thinking			
42.	Would rather be alone than with others			
43.	Lying or cheating			
44.	Bites finger nails			
45.	Nervous, high-strung, or tense			
46.	Nervous movements or twitching (describe) _____ _____			
47.	Nightmares			
48.	Not liked by other kids			
49.	Constipated, doesn't move bowels			
50.	Too fearful or anxious			
51.	Feels dizzy or light headed			
52.	Feels too guilty			
53.	Over eating			
54.	Overtired without good reason			
55.	Overweight			
56(a).	Physical problems ***without known medical cause:*** Aches or pains (*not* stomach or headaches)			
56(b).	Physical problems ***without known medical cause:*** Headaches			
56(c).	Physical problems ***without known medical cause:*** Nausea, feels sick			
56(d).	Physical problems ***without known medical cause:*** Eye problems (***not*** if corrected by glasses) (describe) _____			

	_____ _____ _____ _____			
56(e).	Physical problems ***without known medical cause:*** Rashes or other skin problems			
56(f).	Physical problems ***without known medical cause:*** Stomach-aches			
56(g).	Physical problems ***without known medical cause:*** Vomiting, throwing up			
56(h).	Physical problems ***without known medical cause:*** Other (describe) _____			
57.	Physically attacks people			
58.	Picks nose, skin, or other parts of body (describe) _____			
59.	Plays with own sex parts in public			
60.	Plays with own sex parts too much			
61.	Poor school work			
62.	Poorly coordinated or clumsy			
63.	Prefers being with elder kids			
64.	Prefers being with younger kids			
65.	Refuses to talk			
66.	Repeats certain acts over and over; compulsions (describe) _____ _____			
67.	Runs away from home			
68.	Screams a lot			
69.	Secretive, keeps things to self			
70.	Sees things that aren't there (Describe) _____ _____			
71.	Self conscious or easily embarrassed			
72.	Sets fires			
73.	Sexual problems (describe) _____ _____			
74.	Showing off or clowning			
75.	Too shy or timid			
76.	Sleeps less than most kids			
77.	Sleeps more than most kids during day and/or night (describe)			

	_____ _____			
78.	Inattentive or easily distracted			
79.	Speech problem (describe) _____ _____ _____ _____			
80.	Stares blankly			
81.	Steals at home			
82.	Steals outside the home			
83.	Stores up too many things he/she doesn't need (describe) _____ _____ _____			
84.	Strange behaviour (describe) _____ _____ _____			
85.	Strange ideas (describe) _____ _____ _____			
86.	Stubborn, sullen, or irritable			
87.	Sudden changes in mood or feelings			
88.	Sulks a lot			
89.	Suspicious			
90.	Swearing or obscene language			
91.	Talks about killing self			
92.	Talks or walks in sleep (describe) _____ _____ _____			
93.	Talks too much			
94.	Teases a lot			
95.	Temper tantrums or hot temper			
96.	Thinks about sex too much			
97.	Threatens people			
98.	Thumb -sucking			
99.	Smokes, chews, or sniffs tobacco			
100.	Trouble sleeping (describe) _____			

	_____ _____ _____			
101.	Truancy, skips school			
102.	Under active, slow moving, or lacks energy			
103.	Unhappy, sad, or depressed			
104.	Unusually loud			
105.	Uses drugs for nonmedical purposes (***don't*** include tobacco) (describe) _____ _____ _____ _____			
106.	Vandalism			
107.	Wets self during the day			
108.	Wets the bed			
109.	Whining			
110.	Wishes to be of opposite sex			
111.	Withdrawn, doesn't get involved with others			
112.	Worries			
113.	Please write in any problems the pupil has that were not listed above. (i) _____ (ii) _____ (iii) _____			

ID

Appendix 4

THE UNIVERSITY OF ZAMBIA
DEPT. OF EDUCATIONAL PSYCHOLOGY,
SOCIOLOGY AND SPECIAL EDUCATION
SCHOOL OF EDUCATION

ACADEMIC PERFORMANCE AND PSYCHO-SOCIAL ADJUSTMENT OF GRADE FIVE CHILDREN IN ZAMBIA

PUPIL QUESTIONNAIRE

MATHEMATICS TEST

INSTRUCTION

1. Read these instructions carefully.
2. **DO NOT** turn this page before you are told.
3. There are 45 questions in this paper. You will be given exactly 65 minutes to do the questions
4. For each question four answers are given, but only one of the four is right. Work out which is the **BEST** answer. Then circle letter of your choice.
5. When you have finished one page, go straight to the next page without waiting to be told. If you have time left at the end of the question paper, use it to check your work carefully.
6. Put up your hand now if you have any questions.

BACKGROUND INFORMATION

Name of Province: _____

Name of District: _____

Name of School: _____

Pupils Status:

(a) Father dead ☐

(b) Mother dead ☐

(c) Both parents dead ☐

(d) Both parents alive ☐

Who looks after child?

(a) Elder sister ☐

(b) Elder Brother ☐

(c) Step father ☐

(d) Step mother ☐

(e) Uncle ☐

(f) Aunt ☐

(g) Grandfather ☐

(h) Grandmother ☐

(i) Other (specify) _____

Pupils :

(a) First Name _____

(f) Middle Name _____

(g) Last Name _____

Gender

(a) Boy ☐

(b) Girl ☐

Age _____

Ethnic group or race _____

Pupil's Birth date: (a) Month _____

(b) Day _____

(c) Year _____

Grade in School: Grade 5 ☐

1. $15 \div 3 =$

   (a) 5

   (b) 6

   (c) 12

   (d) 18

2. 2 litres + 8 litres =

   (a) 4 litres

   (b) 6 litres

   (c) 10 litres

   (d) 16 litre

3. 10 ☐ 15

   (a) >

   (b) <

   (c) =

   (d)

4. 7 days =

   (a) 1 week

   (b) 2 weeks

   (c) 1 month

   (d) 2months

5. $\frac{1}{2} + \frac{1}{2} =$

   (a) 1

   (b) $\frac{1}{2}$

   (c) 0

   (d) $\frac{2}{4}$

6. There are ... seconds in one minute.

(a) 12

(b) 24

(c) 30

(d) 60

7. The number which comes next in the sequence 310, 410, 510, is ...

(a) 610

(b) 620

(c) 710

(d) 720

8. How many K100 are in K1 000?

(a) 1

(b) 5

(c) 10

(d) 100

9. What is the ninth month of the year?

(a) July

(b) August

(c) September

(d) October

10. 9 432 can be written in words as ...

(a) nine thousand two.

(b) Ninety four thousand thirty two.

(c) Nine hundred nine thousand thirty two.

(d) Nine thousand four hundred thirty two.

11. Forty divided by eight is equal to ...

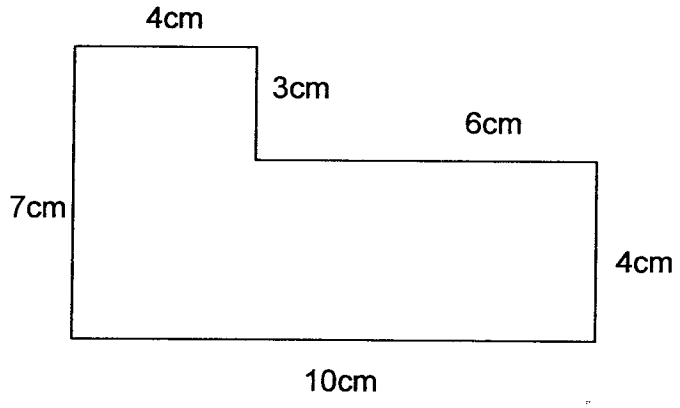
(a) 5

(b) 6

(c) 7

(e) 8

12. Find the perimeter of the shape below.



(a) 26 cm

(b) 34 cm

(c) 36 cm

(d) 90 cm

13. 50 + 900 =

(a) 509

(b) 590

(c) 905

(d) 950

14. 240 ÷ 20 =

(a) 48

(b) 26

(c) 22

(d) 12

15. What is the place value of seven in the number 7 546?

(a) Thousands.

(b) Hundreds.

(c) Tens.

(d) Ones.

16. Add 7 230, 5 281 and 1 346.

(a) 13 857

(b) 13 757

(c) 12 851

(d) 12 757

17. Complete the series below:

9, 18, 27, ..., 45

(a) 28

(b) 29

(c) 36

(d) 38

18. Division means ...

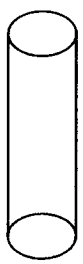
(a) repeated addition

(b) put together

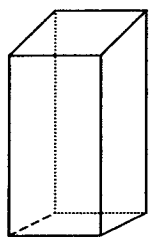
(c) take away

(d) sharing

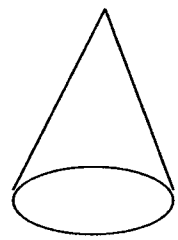
19. Which one of the following shapes is a cone?



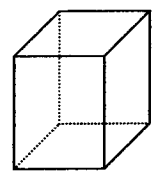
(a)



(b)



(c)



(d)

20. 15 000 millilitres is the same as ...

(a) 15 litres

(b) 105 litres

(c) 150 litres

(d) 1 500 litres

21. 9 x 3 ☐ 6 x 4

a) >

(b) <

(c) =

(d) ≤

22. 12 x 1 000 =

(a) 12

(b) 120

(c) 1 200

(d) 12 000

23. Which of the following is **true**?

(a) 23 x 8 = 8 x 23

(b) 23 x 8 > 8 x 23

(c) 23 x 8 < 8 x 23

(d) 23 x 8 = 8 + 23

24. The smallest unit used for measuring time is the ...

(a) day

(b) hour

(c) minute

(d) second

25. One bag of maize weighs 55.4 kg. What will be the weight of 6 such bags of maize?

(a) 302.4 kg

(b) 330.24 kg

(c) 330.4 kg

(d) 332.4 kg

26. 9.45 – 7.12 =

(a) 2.33

(b) 2.37

(c) 2.47

(d) 2.57

27. Which number must be put in the ☐ to complete the pattern?

2, 0, 3, 1, 4, 2, 5, ☐ , 6, 4.

(a) 2

(b) 3

(c) 4

(d) 5

28. 3 500 metres is the same as ...

(a) 3 km

(b) 3.5 km

(c) 30 km

(d) 35 km

29. Measure the length from X to Z in cm.

X ——————————— Z

(a) 4.5 cm

(b) 4 cm

(c) 5 cm

(d) 7 cm

30. Red is a member of the set of colours. This can be written as ...

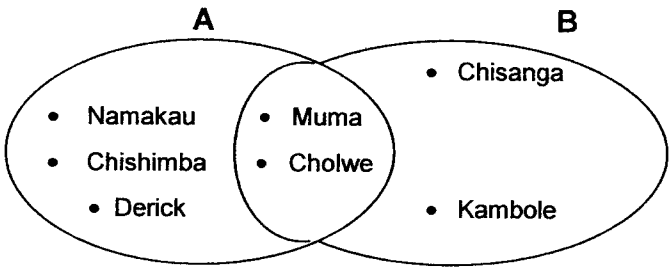
(a) Red = {colours}

(b) Red $\in$ {colours}

(c) Red $\subset$ {colours}

(d) Red $\notin$ {colours}

31. Look at the seta A and B below. The number of members in set B is ...



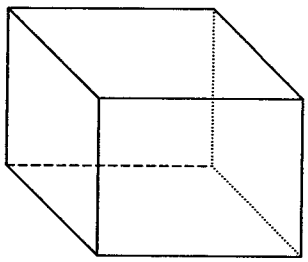
(a) 2

(b) 3

(c) 4

(d) 7

32. The number of faces in the figure below is ...



(a) 4

(b) 5

(c) 6

(d) 7

33. How many classes of 25 children each can be made from a total of 200 children?

(a) 8

(b) 80

(c) 175

(d) 5 000

34. Mr. Katongo bought a shirt at K6 550. How much change did he get from K10 000?

(a) K3 350

(b) K3 450

(c) K4 450

(d) K4 550

35. The cost of a bust ticket from Lusaka to Kabwe is K5 500. How much will 10 tickets for the same journey cost?

(a) K55 000

(b) K10 550

(c) K5 510

(d) K5 490

36. 4.009 litres – 3.997 litres =

(a) 1.120 litres

(b) 1.112 litres

(c) 1.012 litres

(d) 0.012 litres

37. A ball is an example of a ...

(a) sphere

(b) cylinder

(c) cone

(d) circle

38. The tank of a lorry holds 150 litres of diesel when full. If the tank is ½ full, how many litres of diesel are in the tank?

(a) 70 litres

(b) 75 litres

(c) 152 litres

(d) 300 litres

39. The unit of mass is ...

(a) kilometres

(b) kilograms

(c) centimetres

(d) millilitres

40. How many halves are there in two?

(a) 1

(b) 2

(c) 3

(d) 4

41. The product of 9 and 8 is ...

(a) 1

(b) 17

(c) 72

(d) 98

42. Find the difference between 86 775 and 95 000.

(a) 8 225

(b) 8 325

(c) 8 235

(d) 9 235

43. Which of the following months has 31 days?

(a) February

(b) March

(c) April

(d) June

44. $\frac{4}{10} + \frac{6}{10} =$

(a) 1

(b) 2

(c) $\frac{10}{20}$

(d) $\frac{46}{100}$

45. A boy watched $\frac{1}{4}$ of his local team's games. If his team played 56 games, how many games did he watch?

(a) 14

(b) 16

(c) 52

(d) 56

STOP, PLEASE GO BACK AND CHECK YOUR WORK

ID

Appendix 5

THE UNIVERSITY OF ZAMBIA
DEPT. OF EDUCATIONAL PSYCHOLOGY,
SOCIOLOGY AND SPECIAL EDUCATION
SCHOOL OF EDUCATION

ACADEMIC PERFORMANCE AND PSYCHO-SOCIAL ADJUSTMENT OF GRADE FIVE CHILDREN IN ZAMBIA

PUPIL QUESTIONNAIRE

ENGLISH TEST

INSTRUCTION

1. Read these instructions carefully.
2. **DO NOT** turn this page before you are told.
3. *There are 35 questions in this paper. You will be given* ***EXACTLY 65 MINUTES*** to do the questions
4. For each question four answers are given, but only one of the four is right. Work out which is the **BEST** answer. Then circle letter of your choice.
5. When you have finished one page, go straight to the next page without waiting to be told. If you have time left at the end of the question paper, use it to check your work carefully.
6. Put up your hand now if you have any questions.

BACKGROUND INFORMATION

Name of Province: _____

Name of District: _____

Name of School: _____

PART A: Pupil Data

Pupils Status:

(a) Father dead ☐

(b) Mother dead ☐

(c) Both parents dead ☐

(d) Both parents alive ☐

Who looks after child?

(a) Elder sister ☐

(b) Elder Brother ☐

(c) Step father ☐

(d) Step mother ☐

(e) Uncle ☐

(f) Aunt ☐

(g) Grandfather ☐

(h) Grandmother ☐

(i) Other (specify) _____

Pupils :

(a) First Name _____

(b) Middle Name _____

(c) Last Name _____

Gender

(a) Boy ☐

(b) Girl ☐

Age _____

Ethnic group or race _____

Pupil's Birth date: (a) Month _____

(b) Day _____

(c) Year _____

Grade in School: Grade 5 ☐

1. Which one of the following will come last when put in alphabetical order?

   (a) Goat
   (b) Cat
   (c) Pig
   (d) Dog

2. Many people get HIV/AIDS .... Unprotected sex.

   (a) through
   (b) for
   (c) to
   (d) on

3. The boys and girls must not ... down these beautiful trees.

   (a) cutting
   (b) cuts
   (c) cut
   (d) be cut

4. The Victoria Falls have ... of water.

   (a) many
   (b) big
   (c) huge
   (d) plenty

5. Tom is ... than Mutinta.

   (a) most tallest
   (b) taller
   (c) more tall
   (d) tallest

SECTION 2 (Questions 6 – 15)

Read the passage carefully and answer the questions that follow.

THE CHIEF'S SON

Paul lives in a house at the top of the hill. Near the bottom of the hill is a river. Everyday, Paul and his mother go down the hill to fetch water from the river. Paul carries a gourd on his head and his mother carries a big tin on her head. When the gourd and the tin are full of water, they cover the open tops of the gourd and the tin with branches of leaves. Paul and his mother then return up the hill.

Paul's father is a chief and he lives at the top of the hill so that he can see for many miles. Paul is proud of his father. Paul hopes that he will become a chief when he grows up.

6. Where does Paul live?

   (a) At the bottom of the hill.

   (b) At the top of the hill.

   (c) Far from the river.

   (d) Near the river.

7. What is Paul's father?

   (a) Chief

   (b) Headman

   (c) Hero

   (d) King

8. Why does Paul and his mother cover the gourd and the tin with branches of leaves?

   (a) For use when climbing the hill.

   (b) To carry the tin and gourd properly.

   (c) To fill the gourd and the tin.

   (d) To stop the water from spilling out.

9. Paul carries a ... on his head.

(a) gorud

(b) gourd

(c) groud

(d) guord

10. What does Paul want to do when he grows up?

(a) To become a chief.

(b) To carry a gourd.

(c) To fill the tin.

(d) To help his mother.

11. Paul and his mother go down the hill to fetch water. The word 'fetch' means ...

(a) boil

(b) cover

(c) draw

(d) drink

12. Paul ... in a house at the top of the hill.

(a) live

(b) living

(c) lived

(d) lives

13. Chose the correctly punctuated sentence.

(a) Paul's father is a chief.

(b) Pauls' father is a chief.

(c) Pauls father is a chief.

(d) Pauls father is a chief.

14. The sentence, Paul is proud of his father, means Paul is

(a) anger with his father

(b) annoyed with his father

(c) happy with his father

(d) sad with his father

15. Which of the following sentences are arranged in the BEST order?

(a) He fill it with water. Then he covers it with branches of leaves. Paul goes down the hill to fetch water.

(b) Paul goes down the hill to fetch water. He fills it with water. Then he covers it with branches of leaves.

(c) Then he covers it with branches of leaves. He fills it with water. Paul goes down the hill to fetch water.

(d) He fills it with water. Paul goes down the hill to fetch water. Then he covers it with branches of leaves.

SECTION 3 (Questions 16 – 25)

Read the passage carefully and answer the questions that follow.

MAHEU

"Maheu" is a drink which made using leftover nsima. The things needed to make maheu are: one and a half (1½) cups of nsima, two (2) cups of water and three (3) heaped tablespoons of flour.

One of the most important steps to follow when preparing maheu, is to measure the right amount of things to use.

Firstly, sieve the flour and mash the nsima separately. Then, mix the nsima with two cups of water to break the lumps and make a thin porridge. Mix the flour with four (4) tablespoons of the thin porridge to make a smooth paste. Mix the smooth paste with the rest of the thin porridge and stir.

Finally, pour the mixture into a clean and suitable container. Place the container in a sunny place so that the mixture can ferment quickly. The drink is ready to be served after one day.

16. The passage is about ...

(a) serving nsima.

(b) sieving flour.

(c) Serving maheu.

(d) Preparing maheu.

17. What happens if the maheu is left in the sun?

(a) It is spoilt.
(b) It melts.

(c) It ferments.

(d) It becomes thin.

18. How is the thin porridge made?

(a) By mixing the nsima with water.
(b) By putting the maheu in the sun.

(c) By sieving the nsima and flour.

(d) By mixing nsima with flour

19. What is maheu?

(a) porridge

(b) nsima

(c) paste

(d) drink

20. Sieve the flour and mash the nsima and the flour <u>separately</u>. The word <u>'separately'</u> means ...

(a) carefully.
(b) differently.

(c) properly.

(d) together.

21. The drink is ... for serving after one day.

(a) read

(b) readily

(c) ready

(d) red

22. Which of the following sentences is correctly punctuated?

(a) Firstly sieve the flour and mash the nsima separately.

(b) Firstly sieve the Flour and mash the Nsima separately.

(c) Firstly sieve the flour and mash the nsima separately.

(d) Firstly, sieve the flour and mash the nsima separately.

23. Choose the correct spelling.

(a) Importat

(b) Importent

(c) Important

(d) Impontant

24. When do you start serving the maheu?

(a) After one day.

(b) After two days.

(c) After three days.

(d) After four days.

25. What is the most important step to follow when preparing maheu?

(a) Stirring the thin porridge.

(b) Measuring the things to use.

(c) Sieving the flour.

(d) Pouring the mixture into a container.

SECTION 4 (Questions 26 – 35)

Read the chart carefully and answer the questions that follow.

RAINFALL

Each week, Mrs. Banda and her class at Lwanya Primary School made records for rainfall. In the sixth week, the readings were as follows:

Day	Rainfall in mm
Monday	10
Tuesday	0
Wednesday	25
Thursday	15
Friday	20

26. Which day had no rain that week?

(a) Friday

(b) Thursday

(c) Tuesday

(d) Wednesday

27. The reading on Thursday was ...

(a) 10mm

(b) 25mm

(c) 20mm

(d) 15mm

28. At Lwanya Primary School rainfall was recorded ...

(a) every school day.

(b) Every week.

(c) Once a week.

(d) On Monday only.

29. The difference between Monday's and Thursday's readings is ...

(a) 5mm

(b) 10mm

(c) 15mm

(d) 25mm

30. In what units did Mrs. Banda and her class record the rainfall?

(a) Days

(b) Km

(c) Mm

(d) Hours

31. Choose the correctly punctuated sentence.

(a) Mrs Banda, was a teacher, at Lwanya Primary School.

(b) Mrs Banda was a teacher at Lwanya Primary School.

(c) Mrs Banda was a teacher at Lwanya Primary School.!

(d) Mrs banda was a Teacher at Lwanya Primary School.

32. What was the total rainfall for the sixth week?

(a) 30mm

(b) 35mm

(c) 45mm

(d) 70mm

33. Why did Mrs Banda not need an umbrella on Tuesday?

(a) There was more rain.

(b) There was little rain.

(c) There was no rain/

(d) She had no umbrella.

34. What was the reading on Friday?

(a) 5mm

(b) 10mm

(c) 15mm

(d) 20mm

35. Mrs Banda and her class used to ... rainfall readings.

(a) record

(b) records

(c) recorded

(d) recording

STOP! PLEASE CHECK ALL YOUR WORK CAREFULLY

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Appendix 6

THE UNIVERSITY OF ZAMBIA
DEPT. OF EDUCATIONAL PSYCHOLOGY,
SOCIOLOGY AND SPECIAL EDUCATION
SCHOOL OF EDUCATION

ACADEMIC PERFORMANCE AND PSYCHO-SOCIAL ADJUSTMENT OF GRADE FIVE CHILDREN IN ZAMBIA

PUPIL QUESTIONNAIRE

DES II

BACKGROUND INFORMATION

Name of Province: _____

Name of District: _____

Name of School: _____

PART A: Pupil Data

Pupils Status:

(a) Father dead ☐

(b) Mother dead ☐

(c) Both parents dead ☐

(d) Both parents alive ☐

Who looks after you?

(a) Elder sister ☐

(b) Elder Brother ☐

(c) Step father ☐

(d) Step mother ☐

(e) Uncle ☐

(f) Aunt ☐

(g) Grandfather ☐

(h) Grandmother ☐

(i) Other (specify) _____

Pupils :

(a) First Name _____

(b) Middle Name _____

(c) Last Name _____

Gender

(a) Boy ☐

(b) Girl ☐

Age _____

Ethnic group or race _____

Pupil's Birth date: (a) Month _____

(b) Day _____

(c) Year _____

Grade in School: Grade 5 ☐

Instruction: *For all the 28 questions below, tick a number to show the description of some people. Please tick* ***2*** *if the item is very true or often true of some people. Tick* ***1*** *if the item is somewhat or sometimes true of some people. If the item is not true of some people, tick* ***0****. Please answer all items as well as you can.*

	Item	Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
1.	Some people Some people have the experience of driving or riding in a car or bus or subway and suddenly realising that they don't remember what has happed during all or part of the trip.			
2.	Some people find that sometimes they are listening to someone talk and they suddenly realise that they did not hear part or all of what was said			
3.	Some people have the experience of finding themselves in a place having no idea how they got there.			
4.	Some people have the experience of finding themselves dressed in clothes that they don't remember putting on.			
5.	Some people have the experience of finding new things among their belongings that they do not remember buying.			
6.	Some people sometimes find that they are approached by people that they do not know, who call them by another name or insist that they have met them before.			

	Item	Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
7.	Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person.			
8.	Some people are told that they sometimes do not recognise friends or family members.			
9.	Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation).			
10.	ple have the experience of being accused of lying when they do not think that they have lied.			
11.	Some people have the experience of looking in a mirror and not recognising themselves.			
12.	Some people have the experience of feeling that other people, objects, and the world around them are not real.			
13.	Some people have the experience of feeling that their body does not seem to belong to them.			
14.	Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving the event.			
15.	Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just reamed them.			
16.	Some people have the experience of being in a familiar place but finding it strange and unfamiliar.			
17.	Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them.			
18.	Some people find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them.			
19.	Some people find that they sometimes are able to ignore pain.			
20.	Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time.			
21.	Some people sometimes find that when they are alone they talk out loud to themselves.			

	Item	Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
22.	Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people.			
23.	Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations, etc.).			
24.	Some people sometimes find that they cannot remember whether they have done something or have just thought about doing that thing (for example, not knowing whether they have just mailed a letter or have just thought about it).			
25.	Some people find evidence that they have done things that they do not remember doing.			
26.	Some people sometimes find writings, drawings, or notes among their belongings that they must have done but cannot remember doing.			
27.	Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing.			
28.	Some people sometimes feel as if they are looking at the world through a fog, so that people and objects appear far away or unclear.			

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Appendix 7

THE UNIVERSITY OF ZAMBIA
DEPT. OF EDUCATIONAL PSYCHOLOGY,
SOCIOLOGY AND SPECIAL EDUCATION
SCHOOL OF EDUCATION

ACADEMIC PERFORMANCE AND PSYCHO-SOCIAL ADJUSTMENT OF GRADE FIVE CHILDREN IN ZAMBIA

PUPIL QUESTIONNAIRE

YOUTH SELF-REPORT (YSR)

BACKGROUND INFORMATION

Name of Province: _____

Name of District: _____

Name of School: _____

PART A: Pupil Data

Pupils Status:

(a) Father dead ☐

(b) Mother dead ☐

(c) Both parents dead ☐

(d) Both parents alive ☐

Who looks after you?

(a) Elder sister ☐

(b) Elder Brother ☐

(c) Step father ☐

(d) Step mother ☐

(e) Uncle ☐

(f) Aunt ☐

(g) Grandfather ☐

(h) Grandmother ☐

(i) Other (specify) _____

Pupils :

(a) First Name _____

(b) Middle Name _____

(c) Last Name _____

Gender

(a) Boy ☐

(b) Girl ☐

Age _____

Ethnic group or race _____

Pupil's Birth date: (a) Month _____

(b) Day _____

(c) Year _____

Grade in School: Grade 5 ☐

1. Please list the sports you most likes to take part in. (*e.g. swimming, baseball, skating, skate boarding, bike riding, fishing, etc)*

	Name of sport	**Compared to others of your age, about how much time do you spend in each?**				**Compared to others of your age, how well do you do in each one?**			
		Less than average	Average	More than average	Don't know	Below average	Average	Above average	Don't know
a.	None								
b.									
c.									
d.									

2. Please list your favourite hobbies, activities, and games, other than sports: e.*g. stamps, dolls, books, piano, crafts, cars, computers, singing, etc.* (do not include listening to radio or TV).

	Name of sport	**Compared to others of your age, about how much time do you spend in each?**				**Compared to others of your age, how well do you do in each one?**			
		Less than average	Average	More than average	Don't know	Below average	Average	Above average	Don't know
a.	None								
b.									
c.									
d.									

3. Please list any organisations, clubs, teams, or groups you belong to.

	Name of organisations/clubs	Compared to others of the same age, how active is he/she in each?			
		Less active	Average	Above average	Don't know
a.	None				
b.					
c.					

4. Please list any jobs or chores you have. *For example: paper route, babysitting, making bed, working in store, etc. (Include both paid and unpaid jobs and chores)*

	Jobs or chores	Compared to others of the same age, how well do you carry them out?			
		Below average	Average	Above average	Don't know
a.	None				
b.					
c.					

5(i). About how many close friends do you have? *(do not include brothers and sisters)*

(a) None

(b) 1

(c) 2 or 3

(d) 4 or more

5(ii) About how many times a week do you do things with your friends outside of regular school hours? *(Do not include brothers and sisters)*

(a) Less than 1

(b) 1 or 2

(c) 3 or more

6. Compared to others of your age, how well do you:

(i) Get along with your brothers & sisters?

(a) Has no brothers and sisters ☐

(b) Worse ☐

(c) Average ☐

(d) Better ☐

(e) Other family members (specify) _____

(ii) Get along with other kids?

(a) Worse ☐

(b) Average ☐

(c) Better ☐

(iii) Behave with your parents?

(a) Worse ☐

(b) Average ☐

(c) Better ☐

(iv) Do things by yourself?

(a) Worse ☐

(b) Average ☐

(c) Better ☐

7. (a) (i) Performance in academic subjects.

	Subject	Failing	Below average	Average	Above average
a.	Reading, English or Language Arts				
b.	History or social studies				
.c.	Arithmetic or Math				
d.	Science				
e.					
f.					
g.					

(ii) Do you have any illness, disability, or handicap?

(a) No ☐

(b) Yes ☐

Please describe any concerns or problems you have about school:

_____

_____

Please describe any other concerns you have:

_____

_____

Please describe the best things about yourself.

_____

_____

7(b). Below is a list of items that describe pupils. For each item that describes the pupil *now or within the past 2 months*, please tick ***2*** if the item is *very true or often true* of the pupil. Tick ***1*** if the item is *somewhat or sometimes true* of the pupil. If the item is *not true* of the pupil, tick ***0***. Please answer all items as well as you can, even if some do not seem to apply to this pupil.

	Item	Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
1.	I acts too young for my age			
2.	I drink alcohol without my parents' approval (describe) _____ _____ _____			
3.	I argue a lot			
4.	I fail to finish things I start			
5.	There is very little that I enjoy			
6.	Bowel movements outside toilet			
7.	I brag			
8.	I have trouble concentrating or paying attention			
9.	I can't get my mind off certain thoughts; (describe) _____			

	Item	Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
10.	I have trouble sitting still			
11.	I'm too dependent on adults			
12.	I feel lonely			
13.	I feel confused or in a fog			
14.	I cry a lot			
15.	I am pretty hones			
16.	I am mean to others			
17.	I daydream a lot			
18.	I deliberately try to hurt or kill myself			
19.	I try to get a lot of attention			
20.	I destroy my own things			
21.	I destroy things belonging to others			
22.	I disobey my parents			
23.	I disobey at schoolDisobedient at school			
24.	I don't eat as well as I should			
25.	I don't get along with other kids			
26.	I Don't feel guilty after doing something I shoudn't			
27.	I am jealous of others			
28.	I break rules at home, school, or elsewhere			
29.	I am afraid of certain animals, situations, or places, other than school (describe) _____ _____ _____			
30.	I am afraid of going to school			
31.	I am afraid I might think or do something bad			
32.	I feel that I have to be perfect			
33.	I feel that no one loves me			
34.	I feel that others are out to get me			
35.	I feel worthless or inferior			
36.	I accidentally get hurt a lot			
37.	I get in many fights			
38.	I get teased a lot			
39.	I hang around with kids who get in trouble			
40.	I hear sounds or voices that other people think aren't there (describe): _____ _____ _____			
41.	I act without stopping to think			
42.	I would rather be alone than with others			
43.	I lie or cheat			
44.	I bite my fingernails			

		Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
45.	I am nervous or tense			
46.	Parts of my body twitch or make nervous movements (describe) _____			
47.	I have nightmares			
48.	I am not liked by other kids			
49.	I can do certain things better than most kids			
50.	I am too fearful or anxious			
51.	I feel dizzy or light headed			
52.	I feel too guilty			
53.	I eat too much			
54.	I feel overtired without good reason			
55.	I am overweight			
56(a).	Physical problems ***without known medical cause:*** Aches or pains (*not* stomach or headaches)			
56(b).	Physical problems ***without known medical cause:*** Headaches			
56(c).	Physical problems ***without known medical cause:*** Nausea, feels sick			
56(d).	Physical problems ***without known medical cause:*** Eye problems (***not*** if corrected by glasses) (describe) _____ _____ _____ _____ _____			
56(e).	Physical problems ***without known medical cause:*** Rashes or other skin problems			
56(f).	Physical problems ***without known medical cause:*** Stomach-aches			
56(g).	Physical problems ***without known medical cause:*** Vomiting, throwing up			
56(h).	Physical problems ***without known medical cause:*** Other (describe) _____			

		Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
57.	I physically attack people			
58.	I picks my skin or other parts of body (describe) _____			
59.	I can be pretty friendly			
60.	I like to try new things			
61.	My school work is poor			
62.	I am poorly coordinated or clumsy			
63.	I would rather be with older kids than kids of my own age			
64.	I would rather be with younger kids than kids of my own age			
65.	I refuse to talk			
66.	I repeat certain acts over and over (describe) _____ _____			
67.	I run away from home			
68.	I scream a lot			
69.	I am secretive or keep things to myself			
70.	I see things that other people think aren't there (Describe) _____ _____			
71.	I am self conscious or easily embarrassed			
72.	I set fires			
73.	I can work well with my hands			
74.	I show off or clown			
75.	I am too shy or timid			
76.	I sleep less than most kids			
77.	I sleep more than most kids during day and/or night (describe) _____ _____			
78.	I am inattentive or easily distracted			
79.	I have speech problem (describe) _____ _____ _____ _____			
80.	I stand up for my rights			
81.	I steal at home			

		Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
82.	I steal from places other than home			
83.	I store up too many things I don't need (describe) _____ _____ _____			
84.	I do things other people think are strange(describe) _____ _____ _____			
85.	I have thoughts that other people would think are strange(describe) _____ _____ _____			
86.	I am stubborn			
87.	My moods or feelings change suddenly			
88.	I enjoy being with people			
89.	I am suspicious			
90.	I swear or use dirty language			
91.	I think about killing myself			
92.	I like to make others laugh			
93.	I talk too much			
94.	I tease others a lot			
95.	I have a hot temper			
96.	I think about sex too much			
97.	I threaten to hurt people			
98.	–I like to help others			
99.	I smoke, chews, or sniff tobacco			
100.	I have trouble sleeping (describe) _____ _____ _____ _____			
101.	I cut classes or skip school			
102.	I don't have much energy			
103.	I am unhappy, sad, or depressed			
104.	I am louder than others			

		Description		
		0	1	2
		Not true	Somewhat or sometimes true	Very true or often true
105.	I uses drugs for non-medical purposes (***don't*** include alcohol or tobacco) (describe) _____ _____ _____ _____			
106.	I like to be fair to others			
107.	I enjoy a good joke			
108.	I like to take life easy			
109.	I try to help other people when I can			
110.	I wish I were of the opposite sex			
111.	I keep from getting involved with others			
112.	I worry a lot			

Please write down anything else that describes your feelings, behaviour, or interests.

_____

_____

_____

_____

_____