

South African Life Tables 1979-81: presentation of results (by Richardson A.G.),
Transactions of the Actuarial Society of South Africa, VI (III) 1985/86, A.S.S.A.,
1986, p. 503-505.

South African Life Tables 1979-81 : Presentation of Results.

Abstract

The SALT 1979-81 have recently been published by Central Statistical Services report no 02-06-03). In Annexure A, detailed comparisons with previous population life tables are reproduced from the CSS report. Generally, the 1979-81 tables show improved mortality and expectation of life compared to the 1969-71 experience. As with previous reports, life tables for Blacks were not computed by CSS as the registration of vital events is "incomplete" for this population group.

Annexure B, rough mortality rates for Blacks derived by Professor J L. Sadie for the period 1975-1980 are compared with the latest tables for Coloureds, in the belief that there is a close resemblance between the mortality of these two population groups. This comparison indicates that Black mortality may be slightly lighter than Coloured mortality; however reasons are given as to why Professor Sadie's results may be inaccurate, and insurance experience is cited to claim that Black mortality may be heavier than Coloured mortality.

South African Life Tables (Salt) 1979-81

1.1 These have been published recently in a report (number 02-06-03) by Central Statistical Services. The report contains complete life tables for Whites, Coloureds and Asians (separately for males and females) based on the 1980 population census and birth and death statistics for the three years 1979-81 centred about the census year. White population immigration was also taken into account. The population census data were age-sex-specifically adjusted for under-enumeration. Details of methods used are given in the CSS report.

1.2 Generally, the 1979-1981 tables show improved mortality and expectation of life compared to the 1969-1971 experience. The improvements continue the trends of past investigations; the exceptions are Coloured and Asian males, where the 1969-1971 experience was generally higher than the 1959-1961 experience and for some ages the latest mortality rates, while improving over the 1969-1971 levels, are still heavier than the corresponding 1959-1961 rates. Infant mortality has shown by far the largest improvement, i.e. + 40%.

1.3 The "accident hump" remains in the case of White males; in fact the mortality rate at age 25 is shown to have worsened continually since about 1950.

1.4 Detailed comparisons with previous South African population life tables are given in Annexure A (reproduced with the permission of CSS and the Government Printer).

1.5 The following table presents a summary of the overall improvements in the mortality rates for 1979-81 over the corresponding rates for 1969-71 (based on Annexure A):

Population Group	Approximate improvement % in mortality rates for 1979-81 over 1969-71 for ages:		
	O&I	5-60	65-80
White males	34%	11%	10%
White females	32%	13%	13%
Coloured males	48%	6%	0%
Coloured females	49%	11%	11%
Asian males	40%	12%	19%
Asian females	44%	28%	26%

1.6 Improved expectations of life have resulted (more details in Annexure A)

Population group	Expectation of life (SALT 1979-81) at age:		
	O	5	60
White males	66,59	62,96	15,32
White females	74,24	70,42	19,67
Coloured males	54,34	54,92	12,96
Coloured females	62,55	63,17	16,90
Asian males	62,26	59,31	13,57
Asian females	68,39	65,10	15,57

1.7 The 1979-81 expectations of life given above represent an improvement in years over the 1969-71 experience as follows:

Population	Addition of years at age:		
	O	5	60
White males	+1,85	+1,27	+0,71
White females	+1,88	+1,40	+0,89
Coloured males	+5,46	+0,68	+0,03
Coloured females	+6,73	+1,83	+0,93
Asian males	+3,07	+1,83	+1,59
Asian females	+5,22	+3,97	+2,72

Black mortality

2.1 As in previous years, Central Statistical Services reported that "the registration of vital events of Blacks is incomplete and therefore life tables for Blacks were not computed".

- VEREENKING TUSSEN SUID-AFRIKAANSE
LEWENSABELLE
BLANKES - MALEIK

- COMPARISON BETWEEN SOUTH AFRICAN
LIFE TABLES
WHITES - MALE

Ouderdom Age	Sterfte - waarskynlikheid - Probability of dying (i 000q)										
	1979-81	1969-71	1959-61	1950-52	1945-47	1935-37	1925-27				Ouderdom Age
0	15,92	24,67	32,42	37,89	41,28	66,41	74,44				X
1	1,74	1,97	3,14	4,68	5,28	14,64	18,70				0
5	0,73	0,81	0,82	1,30	1,39	1,84	2,52				1
10	0,17	0,20	0,51	0,62	0,87	1,38	2,38				5
15	1,13	1,21	0,82	1,11	1,23	1,79	1,79				10
20	2,43	2,46	2,44	2,61	2,63	2,82	2,82				15
25	2,61	2,49	2,35	2,08	2,11	2,44	2,44				20
30	2,31	2,32	2,57	2,48	2,41	3,22	3,22				25
35	1,85	2,13	3,23	3,11	3,18	4,72	4,72				30
40	1,62	1,83	4,62	4,27	4,56	6,00	6,00				35
45	1,40	1,87	6,90	6,88	7,19	9,55	9,55				40
50	10,40	10,64	10,92	10,92	11,32	13,08	13,08				45
55	18,34	18,06	17,07	16,92	17,48	18,64	17,35				50
60	25,13	27,45	27,11	25,89	25,41	25,56	24,71				55
65	32,18	41,18	38,69	36,43	35,77	37,29	34,82				60
70	39,08	48,96	57,16	50,63	51,74	53,87	51,69				65
75	77,08	89,41	119,48	73,12	77,19	84,88	83,10				70
80	112,22	121,46	111,34	111,90	114,30	120,95	119,12				75
											80

Ouderdom Age	Levensverwagting - Expectation of life (e)										
	1979-81	1969-71	1959-61	1950-52	1945-47	1935-37	1925-27				Ouderdom Age
0	66,59	64,74	64,73	64,57	63,78	58,95	57,78				X
1	66,66	65,37	65,90	66,11	65,51	62,15	61,40				0
5	62,96	61,69	62,33	62,77	62,32	59,86	59,40				1
10	58,13	56,85	57,52	58,08	57,71	55,43	55,17				5
15	53,24	51,98	52,67	53,26	52,97	50,84	50,67				10
20	48,68	47,42	48,04	48,66	48,35	46,43	46,27				15
25	44,28	43,00	43,61	44,14	43,84	42,24	42,09				20
30	39,73	38,48	39,11	39,60	39,29	37,93	37,87				25
35	35,96	34,73	35,34	35,81	35,49	34,73	34,73				30
40	32,47	31,29	31,92	32,38	32,06	31,45	31,45				35
45	28,47	27,36	28,00	28,44	28,12	27,68	27,68				40
50	24,16	23,10	23,77	24,19	23,87	23,58	23,58				45
55	18,66	17,68	18,37	18,79	18,61	18,21	18,21				50
60	15,32	14,46	15,18	15,53	15,34	14,97	14,97				55
65	12,40	11,77	12,48	12,68	12,41	12,09	12,09				60
70	9,79	9,37	9,89	9,75	9,79	9,34	9,34				65
75	7,57	7,41	7,60	7,75	7,47	7,05	7,05				70
80	5,61	5,82	5,74	5,73	5,51	5,20	5,20				75
											80

60
70

3.3 The infant mortality rate is of course an indicator of socio-economic levels, and the latter would have to improve before the former would drop to the much lower levels now reported for the other population groups in the SALT 1979-1981. If socio-economic levels improve for Blacks, fertility levels could also be expected to decline for other reasons as well as the obvious one of not needing to produce more babies to overcome high (whether really high or merely perceived as high) child mortality rates.

Acknowledgments

4.1 Credit is due to Mr J de Bruin who actually conducted the mortality investigation referred to in paragraph 2.8 above and who kindly supplied me with his comments on a draft of this presentation. Professor R Dorrington of UCT also supplied useful comments, and was the initiator and supervisor of the work done by Mr Klein mentioned in paragraph 3.2 above. Mr R Grenville-Jones was responsible for extracting the long overdue life tables from the publishing authorities in time for the 1985 convention.

ANNEXURE A - page 2

- VERGELYKING TUSSEN SUID-AFRIKAANSE
LEWENSTABELLE
BLANKES - VROUWLIK

- COMPARISON BETWEEN SOUTH AFRICAN
LIFE TABLES
WHITES - FEMALE

Ouderdom		Sterfte - waarskynlikheid - Probability of dying (1 000q _x)										
Age		1979-81	1969-71	1959-61	1950-52	1945-47	1935-37	1925-27				Ouderdom
Age		X	X	X	X	X	X	X				X
0	0	12,35	18,85	24,93	30,95	32,91	33,48	52,76				0
1	1	1,63	1,78	2,64	3,97	4,83	14,02	18,38				1
5	5	0,44	0,51	0,70	1,13	1,25	2,19	2,37				5
10	10	0,25	0,19	0,41	0,60	0,76	1,47	1,48				10
15	15	0,43	0,47	0,43	0,71	1,00	1,43	1,91				15
20	20	0,68	0,68	0,52	1,01	1,25	2,33	2,60				20
25	25	0,84	1,15	1,17	1,24	1,77	2,87	3,25				25
30	30	1,26	1,52	1,66	2,08	2,08	3,17	3,98				30
35	35	2,05	2,56	2,59	2,97	2,93	4,18	4,75				35
40	40	3,43	4,13	4,03	4,48	4,48	5,71	5,43				40
45	45	5,35	6,35	6,11	6,93	6,71	8,20	8,20				45
50	50	8,04	9,51	8,78	9,80	11,27	12,49	12,75				50
55	55	12,69	13,79	13,79	14,38	15,68	17,98	17,25				55
60	60	19,75	21,51	21,88	22,12	23,72	28,52	28,92				60
65	65	30,08	34,33	33,88	35,18	36,63	42,41	42,97				65
70	70	45,07	54,51	54,19	57,14	60,11	67,25	71,89				70
75	75	76,31	86,77	89,38	91,42	90,28	108,29	103,09				75
80	80											80

Ouderdom		Levensverwagting - Expectation of life (e _x)										
Age		1979-81	1969-71	1959-61	1950-52	1945-47	1935-37	1925-27				Ouderdom
Age		X	X	X	X	X	X	X				X
0	0	74,24	72,36	71,87	70,98	68,11	63,06	61,48				0
1	1	74,16	72,36	71,87	71,08	68,11	63,06	61,48				1
5	5	70,42	69,02	68,90	67,81	64,93	60,80	58,76				5
10	10	65,54	64,15	64,08	63,09	61,73	58,30	56,76				10
15	15	60,63	59,23	59,20	58,27	56,57	53,78	52,33				15
20	20	55,80	54,41	54,36	53,51	52,27	49,77	48,76				20
25	25	51,01	49,63	49,57	48,79	47,63	45,33	44,74				25
30	30	46,22	44,86	44,82	44,10	43,06	40,98	40,71				30
35	35	41,45	40,13	40,10	39,47	38,52	36,68	36,60				35
40	40	36,75	35,48	35,48	34,93	34,07	32,44	32,47				40
45	45	32,19	31,01	30,99	30,50	29,76	28,29	28,34				45
50	50	27,81	26,71	26,69	26,27	25,66	24,30	24,38				50
55	55	23,62	22,65	22,56	22,24	21,76	20,41	20,41				55
60	60	19,67	18,78	18,64	18,40	18,04	16,82	16,76				60
65	65	16,04	15,18	15,06	14,82	14,55	13,46	13,36				65
70	70	12,73	11,96	11,83	11,59	11,39	10,50	10,42				70
75	75	9,75	9,18	8,97	8,81	8,68	7,88	7,85				75
80	80	7,10	6,89	6,64	6,54	6,43	5,75	5,85				80