

Estimation of Number of Sterilization Victim Survivors

By
Don Akin
Statistician
State Center for Health Statistics
Don.Akin@dhhs.nc.gov
(919) 715-4471

Estimation of Number of Sterilization Victim Survivors

- Source of Data
- Characteristics of Victims
- Estimation Procedures
- Characteristics of Expected Survivors
- Limitations
- Acknowledgements

Source of Data

- “Eugenical Sterilization *in* North Carolina” issued by Eugenics Board Of North Carolina (1935)
- 1934-1936 thru 1966-1968 “Biennial Report of The Eugenics Board Of North Carolina
- 1933 – 1975 Sterilization Victim Database

1935 Eugenical Sterilization Report

Type of Operation by Race

TABLE IX
STERILIZATION OPERATIONS WITH REFERENCE TO TYPE OF OPERATION AND RACE,
JUNE 30, -1935.

Type of Operation	White	Negro	Total
Vasectomy	10	8	18
Castration	6	20	26
Salpingectomy	157	10	167
Ovariectomy	11	1	12
Total	184	39	223

1935

Eugenical Sterilization Report

TABLE VI
AGE, SEX AND TYPE OF OPERATION OF PERSONS STERILIZED AND ASEXUALIZED IN
NORTH CAROLINA TO JUNE 30, 1935.

Age	Vasectomy	Castration	Total Males	Salpin- gectomy	Ovari- ectomy	Total Females	Total
10-19*.....	1	7	8	70	9	79	87
20-29.....	6	14	20	65	2	67	87
30-39.....	7	3	10	31	1	32	42
40-49.....	2	1	3	1	....	1	4
Over 49.....	2	....	2	....	....	....	2
Unknown.....	....	1	1	....	....	....	1
Totals.....	18	26	44	167	12	179	223

*Of the 87 cases in this group six were under 14—one at age 10, two at age 12, and three at age 13.

1934-1936

Biennial Eugenics Report

TABLE VI

AGE, SEX AND TYPE OF OPERATION OF PERSONS STERILIZED AND ASEXUALIZED IN
NORTH CAROLINA, 1929 TO JUNE 30, 1936

Age	Vasectomy	Castration	Total Males	Salpin- gectomy	Ovari- ectomy	Total Females	Total
10-19.....	7	7	14	126	9	135	149
20-29.....	13	15	28	89	2	91	119
30-39.....	10	3	13	43	1	44	57
40-49.....	2	1	3	1	....	1	4
Over 49.....	2	....	2	....	....	....	2
Unknown....	....	1	1	....	....	....	1
Total.....	34	27	61	259	12	271	332

Sample Card Image from 1933-1975 Sterilization Victim "Database"

Name Deleted

(W)
Caswell Training School
(Granville Co.)

Age 18

4-58

Psychological: January 24, 1958

Sterilization ordered:

4-22-58

Operation performed:

6-17-58

Distribution of Victims by Age* and Gender

*At Date of Sterilization

Age Range	Males	Females	Total
10-19	445	2,545	2,990
20-29	368	2,553	2,921
30-39	205	1,229	1,434
40-49	78	91	169
50+	12	0	12
Unknown	2	0	2
Total	1,110	6,418	7,528

Distribution of Victims by Date of Sterilization and Race Through June 1968

Date of Sterilization	White	Nonwhite	Total
Jan 1929 to Jun 1935	184	39	223
Jul 1935 to Jun 1940	547	162	709
Jul 1940 to Jun 1950	1,211	395	1,606
Jul 1950 to Jun 1960	1,804	1,179	2,983
Jul 1960 to Jun 1968	569	1,051	1,620
Total	4,315	2,826	7,141

Distribution of Victims by Date of Sterilization and Age

Date of Sterilization	10-19	20-29	30-39	40-49	50-59	Unk.	Total
Jan 1929 to Jun 1935	87	87	42	4	2	1	223
Jul 1935 to Jun 1940	380	205	112	11	1	0	709
Jul 1940 to Jun 1950	727	593	249	36	0	1	1,606
Jul 1950 to Jun 1960	936	1,201	745	93	8	0	2,983
Jul 1960 to Dec 1968	686	717	260	23	1	0	1,687
Jan 1969 to Dec 1974	174	118	26	2	0	0	320
Total	2,990	2,921	1,434	169	12	2	7,528

Estimation Procedures

- Known: Age, Gender and Approximate Year of Sterilization
- Age and Race alone - not a good predictor of life expectancy
- Estimate Probability that Victim was Alive in 2010
- Probability computed from Life Tables
- Life Tables developed using Decennial Census Population Counts and Deaths by Age Group and Gender
- Used Census Year nearest to Year of Sterilization

1930 Abridged Life Table for Females (Selected Rows and Columns)

Age Interval	Population Estimate	Death Count	Mortality Rate	L_x	Life Expectancy
<5	192,968	3,651	0.01892	464822	57.03
5-9	211,896	317	0.00150	454328	57.44
10-14	188,796	271	0.00144	451010	52.85
15-19	182,030	628	0.00345	445549	48.21
					
80-84	5,175	792	0.15304	59975	5.60
85-89	2,091	430	0.20564	24455	4.45
90-94	665	182	0.27368	7055	3.58
95-99	190	57	0.30000	1273	3.28
100+	161	55	0.34161	186	2.93

Life Tables

- L_x is defined as the number of person-years lived in each age interval starting with an arbitrary 100,000 persons born
- Ratio of (L_x at 95-99) / (L_x at 15-19) = Probability that 18 year old female sterilized in 1930 will be alive in 2010 at age of 98 (= 2010 – 1930 + 18)
- Probability = .29% (= 1273 / 445549)
- Sum of probabilities over all victims equals expected number of survivors

Life Table Assumptions

- Mortality Rates based on General Population (Year, Age, and Sex)
- Distribution of Victims
 - 73% “Mentally Retarded” or “Feeble-mindedness” i.e., Intellectual or Developmental Disability
 - 22% “Mental Disease”, “Mental Illness”
 - 5% Epilepsy
- Mortality Rates probably under-estimated as related to victims

Expected Distribution of Survivors

Date of Sterilization	Male	Females	Total
Jan 1929 to Jun 1936	0.14	2.42	2.56
Jul 1936 to Jun 1940	8.14	62.41	70.54
Jul 1940 to Jun 1950	45.35	308.48	353.84
Jul 1950 to Jun 1960	136.61	993.97	1,130.58
Jul 1960 to Dec 1968	20.78	1,100.88	1,121.66
Jan 1969 to Dec 1974	8.70	255.80	264.50
Total	219.72	2,723.96	2,943.68

Expected Distribution of Survivors (Age in 2010)

Age Range	Males	Females	Total
50-59	11.48	285.43	296.91
60-69	42.19	877.93	920.12
70-79	104.99	1,015.85	1,120.85
80-89	53.66	493.96	547.62
90-99	7.08	48.90	55.97
100 or older	0.31	1.89	2.20
Total	219.72	2,723.96	2,943.68

Acknowledgement

I appreciate the assistance from

- Kathleen Jones-Vessey (Head – Statistical Services / SCHS)
- Jennifer Song (State Demographer)