

C.8 Survival Analysis (Life Table Method)

Duration of exclusive breast feeding was recorded for 64 children by monthly visit to their homes. Some were not available at the time of the visit and the data for them was incomplete. Termination 0 means that the duration is incomplete and 1 means complete. Let us use life-table method to obtain survival curve and the median duration of exclusive breast feeding in these children.

Life table method is applied because time is aggregated in the equal interval of one month.

SPSS command to run the life table method:

```
SURVIVAL
  TABLE=Month_ending
  /INTERVAL=THRU 9 BY 1
  /STATUS=Termination(1)
  /PRINT=TABLE
  /PLOTS (SURVIVAL HAZARD )=Month_ending.
```

This command calculates the median duration of exclusive breast feeding and prints the survival curve and hazard curve.

Survival Analysis

Survival Variable: Duration of breast feed (months)

Life Table^a

Interval Start Time	Number Entering Interval	Number Withdrawing during Interval	Number Exposed to Risk	Number of Terminal Events	Proportion Terminating
0	64	0	64.000	0	.00
1	64	2	63.000	1	.02
2	61	3	59.500	2	.03
3	56	3	54.500	11	.20
4	42	1	41.500	14	.34
5	27	2	26.000	11	.42
6	14	0	14.000	7	.50
7	7	2	6.000	3	.50
8	2	0	2.000	1	.50
9	1	0	1.000	1	1.00

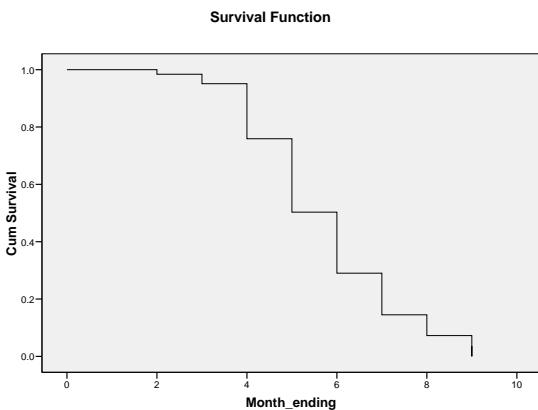
a. The median duration of exclusive breastfeed is 5.01 months

Life Table^a

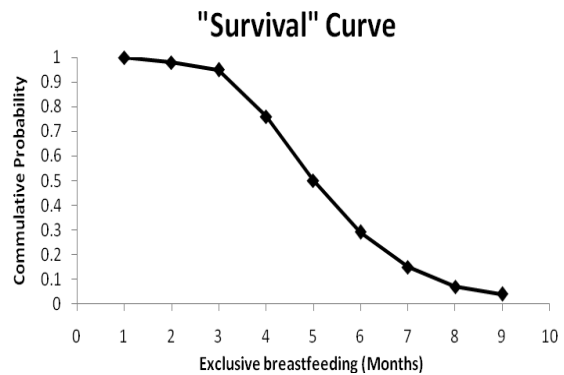
Interval	Proportion Surviving	Cumulative Proportion Surviving at End of Interval	Std. Error of Cumulative Proportion Surviving at End of Interval	Probability Density	Std. Error of Probability Density
0	1.00	1.00	.00	.000	.000
1	.98	.98	.02	.016	.016
2	.97	.95	.03	.033	.023
3	.80	.76	.06	.192	.052
4	.66	.50	.07	.256	.059
5	.58	.29	.06	.213	.056
6	.50	.15	.05	.145	.050
7	.50	.07	.04	.073	.039
8	.50	.04	.03	.036	.032
9	.00	.00	.00	.000	.000

a. The median duration of exclusive breastfeed is 5.01 months

Survival curve in Figure C.8(a) is from SPSS. The survival curve in Figure C.8(b) has been obtained by Excel using the survival probabilities given in the above table.



(a)



(b)

FIGURE C.8 (a) Step-down survival curve for exclusive breast-feeding, (b) Life table survival curve for duration of exclusive breast-feeding

Survival plot depicts cumulative probability of exclusive breast feeding according to the month. The median 5.01 months was calculated when the cumulated probability is 0.50.