

# Package ‘SDaA’

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**Type** Package

**Title** Sampling: Design and Analysis

**Version** 0.1-3

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**Description** Functions and Datasets from Lohr, S. (1999), Sampling: Design and Analysis, Duxbury.

**Suggests** survey, ggplot2 (>= 0.8.2)

**License** GPL-3

**LazyData** Yes

**Collate** 'agpop.R' 'agsrs.R' 'agstrat.R' 'anthrop.R' 'anthsrs.R'  
'anthuneq.R' 'audit.R' 'books.R' 'certify.R' 'coots.R'  
'counties.R' 'divorce.R' 'golfsrs.R' 'htpop.R' 'htsrs.R'  
'htstrat.R' 'journal.R' 'lahiri.design.R' 'measles.R' 'ncvs.R'  
'nybight.R' 'otters.R' 'ozone.R' 'samples.R' 'seals.R'  
'selectrs.R' 'statepop.R' 'statepps.R' 'syc.R' 'teachers.R' 'teachmi.R' 'teachnr.R' 'winter.R'

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**NeedsCompilation** no

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agpop

*Data from the U...*


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### Description

Data from the U.S. 1992 Census of Agriculture

### References

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 437.

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agsrs

*Data from a SRS of size 300 from the U...*

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**Description**

Data from a SRS of size 300 from the U.S. 1992 Census of Agriculture

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 437.

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agstrat

*Data from a stratified random sample of size 300 from...*

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**Description**

Data from a stratified random sample of size 300 from the U.S. 1992 Census of Agriculture.

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 437.

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anthrop

*Length of Left Middle Finger and Height for 3000 Criminals...*

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**Description**

Length of Left Middle Finger and Height for 3000 Criminals

**Details**

Length of left middle finger and height for 3000 criminals

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 438.

---

 anthsrs

*Length of Left Middle Finger and Height for an SRS of Size 200...*


---

**Description**

Length of Left Middle Finger and Height for an SRS of Size 200

**Details**

Length of left middle finger and height for an SRS of 200 criminals from the anthrop dataset

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 438.

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anthuneq

*Length of Left Middle Finger and Height for an Unequal-Probability Sample of Size 200...*


---

**Description**

Length of Left Middle Finger and Height for an Unequal-Probability Sample of Size 200

**Details**

Length of left middle finger and height for an unequal-probability sample of criminals of size 200 from the anthrop dataset. The probability of selection,  $\psi[i]$ , was proportional to 24 for  $y < 65$ , 12 for  $y = 65$ , 2 for  $y = 66$  or  $67$ , and 1 for  $y > 67$ .

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 438.

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athrop

*Length of Left Middle Finger and Height for 3000 Criminals...*


---

**Description**

Length of Left Middle Finger and Height for 3000 Criminals

**Details**

Length of left middle finger and height for 3000 criminals

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 438.

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audit	<i>Selection of Accounts for Audit in Example 6...</i>
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**Description**

Selection of Accounts for Audit in Example 6.11

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 439.

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books	<i>Data from Home Owner's Survey on Total Number of Books...</i>
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**Description**

Data from Home Owner's Survey on Total Number of Books

**Details**

Data from home owner's survey on total number of books

**Note**

Used in Exercise 6 of Chapter 5.

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 439.

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certify	<i>Data from the 1994 Survey of ASA Membership on Certification...</i>
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**Description**

Data from the 1994 Survey of ASA Membership on Certification

**Note**

The full dataset is on Statlib

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 439. <http://lib.stat.cmu.edu/asacert/certsurvey>

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coots	<i>Egg Size from Coots...</i>
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**Description**

Egg Size from Coots

**Details**

Selected information on egg size from coots, from a study by Arnold (1991). Data courtesy of Todd Arnold.

**Note**

Not all observations are used for this data set, so results may not agree with those in Arnold (1991)

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 440.

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counties	<i>Data from an SRS of 100 of the 3141 Counties in the U...</i>
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**Description**

Data from an SRS of 100 of the 3141 Counties in the U.S.

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 440.

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divorce	<i>Data from a Sample of Divorce Records...</i>
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**Description**

Data from a Sample of Divorce Records

**Details**

Data from a sample of divorce records for states in the Divorce Registration Area (National Center for Health Statistics 1987)

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 440.

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golfdrs

*Simple Random Sample of Golf Courses...*

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**Description**

Simple Random Sample of Golf Courses

**Details**

Simple Random Sample (SRS) of 120 golf courses taken from the population of the Website [www.golfcourse.com](http://www.golfcourse.com)

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and TODO.

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htpop

*Height and gender of 2000 persons in an artificial population...*

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**Description**

Height and gender of 2000 persons in an artificial population

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. 230–234 and 441.

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htsrs

*Height and gender for an SRS of 200 persons, taken from htpop...*

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**Description**

Height and gender for an SRS of 200 persons, taken from htpop

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. 230–234 and 442.

---

htstract

*Height and gender for a stratified random sample from htpop...*

---

**Description**

Height and gender for a stratified random sample from htpop

**Details**

Height and gender for a stratified random sample of 160 women and 40 men taken from the htpop population

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. 230–234 and 442.

---

htstrat

*Height and gender for a stratified random sample from htpop...*

---

**Description**

Height and gender for a stratified random sample from htpop

**Details**

Height and gender for a stratified random sample of 160 women and 40 men taken from the htpop population

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. 230–234 and 442.

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journal

*Types of Sampling Used for Articles in a Sample of Journals...*

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**Description**

Types of Sampling Used for Articles in a Sample of Journals

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 442.

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lahiri.design	<i>Draw Samples Using Lahiri's Method...</i>
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**Description**

Draw Samples Using Lahiri's Method

**Usage**

```
lahiri.design(release, n, cnames=seq(along = release))
```

**Arguments**

release	vector of relative sizes of population PSUs
n	desired sample size
cnames	vector of PSU names for population

**Value**

clusters vector of n PSUs selected with replacement and with probability proportional to release

**Note**

Original code from Lohr (1999), p. 452 – 453.

**Author(s)**

Sharon Lohr, slightly modified by Tobias Verbeke

**References**

Lahiri, D. B. (1951). A method of sample selection providing unbiased ratio estimates, *Bulletin of the International Statistical Institute*, 33: 133 – 140.

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measles	<i>Survey of Parents of Children Non-Immunized against Measles...</i>
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**Description**

Survey of Parents of Children Non-Immunized against Measles

**Details**

Roberts et al. (1995) report on the results of a survey of parents whose children had not been immunized against measles during a recent campaign to immunize all children in the first five years of secondary school.

**Note**

The original data were unavailable; univariate and multivariate summary statistics from these artificial data, however, are consistent with those in the paper.

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 442.

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 ncvs

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*Victimization Incidents in the July-December 1989 NCVS...*


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**Description**

Victimization Incidents in the July-December 1989 NCVS

**Details**

Selected variables for victimization incidents in the July-December 1989 NCVS. Note that some variables were recoded from the original data file.

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 443.

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 nybight

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*Data Collected in the New York Bight...*


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**Description**

Data Collected in the New York Bight

**Details**

Data collected in the New York Bight for June 1974 and June 1975 (Wilk et al. 1977)

**Note**

Two of the original strata were combined because of insufficient sample sizes.

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 443.

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otters	<i>Otters Data...</i>
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**Description**

Otters Data

**Details**

Data on number of holts (dens) in Shetland, United Kingdom used in Kruuk et al. (1989). (Data courtesy of Hans Kruuk).

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 443.

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ozone	<i>Ozone Readings from Eskdalemuir, for 1994 and 1995...</i>
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**Description**

Ozone Readings from Eskdalemuir, for 1994 and 1995

**Details**

Hourly ozone readings in parts per billion (ppb) from Eskdalemuir, Scotland, for 1994 and 1995

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 443.

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samples	<i>Samples Dataset...</i>
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**Description**

Samples Dataset

**Details**

All possible SRSs that can be generated from the population in Example 2.1 of Lohr(1999).

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. 26–27 and 444.

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seals

*Breathing Holes of Seals...*

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**Description**

Breathing Holes of Seals

**Details**

Data on number of breathing holes found in sampled areas of Svalbard fjords, reconstructed from summary statistics given in Lydersen and Ryg (1991)

**Note**

The data are used in Chapter 4, Exercise 11.

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 444.

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selectrs

*Steps used in Selecting an SRS...*

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**Description**

Steps used in Selecting an SRS

**Details**

Steps used in selecting the simple random sample (SRS) in Example 2.4 of Lohr(1999).

**Note**

the set of indices in column e was used to select observations from agpop into dataset agsrs.

**References**

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. 31–34 and 444.

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statepop	<i>Unequal-Probability Sample of Counties in the US...</i>
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**Description**

Unequal-Probability Sample of Counties in the US

**Details**

counties selected with probability proportional to 1992 population

**References**

Lohr (1999). *Sampling: Design and Analysis*, Duxbury, p. 190 – 192 and 444.

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statepps	<i>Information on States...</i>
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**Description**

Information on States

**Details**

Number of counties, land area, and population for the 50 states plus the District of Columbia

**References**

Lohr (1999). *Sampling: Design and Analysis*, Duxbury, p. TODO and 445.

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syc	<i>Survey of Youth in Custody, 1987...</i>
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**Description**

Survey of Youth in Custody, 1987

**Details**

The 1987 Survey of Youth in Custody sampled juveniles and young adults in long-term, state-operated juvenile institutions. Residents of facilities at the end of 1987 were interviewed about family background, previous criminal history, and drug and alcohol use. Selected variables from the survey are contained in the syc data frame.

**References**

Lohr (1999). *Sampling: Design and Analysis*, Duxbury, p. 235–239 and 445.

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 teachers

*Elementary School Teacher Workload Data...*


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**Description**

Elementary School Teacher Workload Data

**Details**

Selected variables from a study on elementary school teacher workload in Maricopa County, Arizona.

**Note**

The study is described in Exercise 16 of Chapter 15. The psu sizes are given in [teachmi](#). The large stratum had 245 schools; the small/medium stratum had 66 schools.

**References**

Gnap, R. (1995). Teacher load in Arizona elementary school districts in Maricopa County. Ph.D. diss., Arizona State University

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 446.

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 teachmi

*Cluster Sizes for Elementary School Teacher Workload Data...*


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**Description**

Cluster Sizes for Elementary School Teacher Workload Data

**Details**

Cluster sizes for the study on elementary school teacher workload in Maricopa County, Arizona.

**Note**

The study is described in Exercise 16 of Chapter 15. The actual date are given in [teachers](#).

**References**

Gnap, R. (1995). Teacher load in Arizona elementary school districts in Maricopa County. Ph.D. diss., Arizona State University

Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 446.

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teachnr

*Follow-Up Study of Nonrespondents from Gnap (1995)...*

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**Description**

Follow-Up Study of Nonrespondents from Gnap (1995)

**Details**

Follow-up study of nonrespondents from the Gnap (1995) study on the workload of elementary school teachers in Maricopa County, Arizona.

**Note**

The study is described in Exercise 16 of Chapter 15. The actual data are given in [teachers](#). Cluster size data for the original study are given in [teachmi](#).

**References**

- Gnap, R. (1995). Teacher load in Arizona elementary school districts in Maricopa County. Ph.D. diss., Arizona State University
- Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 446.

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winter

*ASU Winter Closure Survey...*

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**Description**

ASU Winter Closure Survey

**Details**

Selected variables from the Arizona State University Winter Closure Survey, taken in January 1995. This survey was taken to investigate the attitudes and opinions of university employees toward the closing of the university between December 25 and January 1.

**References**

- Lohr (1999). Sampling: Design and Analysis, Duxbury, p. TODO and 447–448.

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