

# Chapter 11

## Data Appendix

### 11.1 Sirin (2005) Meta-analysis on the Association Between Measures of Socioeconomic Status and Academic Achievement

Sirin (2005) conducted a systematic review of studies reporting a correlation between socioeconomic status (SES) and academic achievement. A number of different measures have been used in the literature for both SES and achievement; the goal of the meta-analysis was to examine whether variation in the strength of the association between SES and achievement varies depending on the types of measures used, and characteristics of the studies and their samples. The data used to construct Table 3.1 through 3.6 are given in Table 11.1 below.

The data below are the cases from Sirin (2005) used in the meta-regression in Chap. 3 (Table 11.2).

**Table 11.1** Selected cases from Sirin (2005)

Case	N	<i>r</i>	Achievement measure	SES measure
1	453	0.391	GPA	Free lunch
2	39	0.719	State Test	Free lunch
3	106	0.072	State Test	Free lunch
4	85	0.467	State Test	Free lunch
5	119	0.65	State Test	Free lunch
6	1,573	0.124	Standardized Test	Free lunch
7	1,686	0.175	Standardized Test	Free lunch
8	332	0.54	Standardized Test	Free lunch
9	133	0.06	Standardized Test	Free lunch
10	133	0.43	Standardized Test	Free lunch
11	335	0.166	Standardized Test	Free lunch
12	74	0.43	Achievement Test	Income
13	21,263	0.247	State Test	Income
14	13,279	0.142	State Test	Income
15	415	0.15	Standardized Test	Income
16	120	0.13	GPA	Education
17	302	0.095	GPA	Education
18	696	0.18	GPA	Education
19	113	0.005	GPA	Education
20	3,533	0.34	GPA	Education
21	372	0.06	GPA	Education
22	1,368	0.215	GPA	Education
23	446	0.035	GPA	Education
24	150	0.36	GPA	Education
25	213	0.307	Achievement Test	Education
26	1,328	0.33	Achievement Test	Education
27	1,028	0.16	Achievement Test	Education
28	29	0.334	Achievement Test	Education
29	317	0.403	Standardized Test	Education
30	335	0.202	Standardized Test	Education
31	563	0.18	Standardized Test	Education
32	286	0.23	Standardized Test	Education
33	392	0.44	Standardized Test	Education

**Table 11.2** Data for the meta-regression in Table 3.7

Case	Grade	Percent minority	Free lunch	Education level	<i>r</i>	N
1	Primary	0	0	1	1,328	0.33
2	Primary	21	1	0	1,573	0.124
3	Primary	48	0	1	29	0.334
4	Primary	60	1	0	453	0.391
5	Primary	83	0	1	317	0.403
6	Primary	100	0	1	1,028	0.16
7	Elementary	17	0	0	168	0.34

(continued)

**Table 11.2** (continued)

Case	Grade	Percent minority	Free lunch	Education level	<i>r</i>	N
8	Elementary	19	1	0	332	0.54
9	Elementary	23	0	1	150	0.36
10	Elementary	36	0	0	143	0.3
11	Elementary	38	0	0	868	0.4
12	Elementary	38	1	0	119	0.65
13	Elementary	55	0	1	392	0.44
14	Elementary	96	0	1	113	0.005
15	Elementary	100	0	1	563	0.18
16	Elementary	100	1	0	133	0.06
17	Elementary	100	1	0	133	0.43
18	Middle	0	0	0	74	0.43
19	Middle	2	0	1	302	0.095
20	Middle	6	1	0	335	0.166
21	Middle	19	0	0	357	0.08
22	Middle	33	1	0	1,686	0.175
23	Middle	49	0	0	398	0.132
24	Middle	75	1	0	85	0.467
25	Middle	100	0	1	120	0.13
26	Middle	100	0	1	286	0.23
27	High school	0	0	0	21,263	0.247
28	High school	0	0	1	3,533	0.34
29	High school	0	0	1	1,368	0.215
30	High school	28	0	1	335	0.202
31	High school	60	0	0	415	0.15
32	High school	76	0	1	696	0.18
33	High school	85	0	0	96	0.01
34	High school	100	0	0	13,279	0.142
35	High school	100	0	1	372	0.06
36	High school	100	0	1	446	0.035
37	Post-secondary	27	1	0	2,307	0.75
38	Post-secondary	31	0	1	1,200	0.315
39	Post-secondary	44	1	0	1,301	0.68
40	Post-secondary	50	0	0	116	0.621

## 11.2 Hackshaw et al. (1997) Meta-analysis on Exposure to Passive Smoking and Lung Cancer

We use data from Hackshaw et al. (1997) study of the relationship between passive smoking and lung cancer in women to illustrate computations using odds-ratios. The 37 studies included in the meta-analysis compare the number of cases of lung cancer diagnosed in a group of individuals whose spouses smoke with the number of cases of lung cancer diagnosed in individuals whose spouses were non-smokers. Table 11.3 presents the data used in the odds-ratio examples.

**Table 11.3** Passive smoking and lung cancer studies

Study	Exposed	Not exposed	Log odds-ratio	Variance
Liu et al.	84	139	-0.301	0.18
Chan et al.	22	133	-0.288	0.08
Kabat et al.	62	190	-0.236	0.339
Wu-Williams et al.	41	196	-0.236	0.016
Buffler et al.	24	25	-0.223	0.193
Brownson et al.	60	144	-0.03	0.013
Lee et al.	134	402	0.03	0.217
Pershagen et al.	29	62	0.03	0.072
Sobue	94	270	0.058	0.034
Shimizu et al.	32	66	0.077	0.071
Kabat et al.	86	136	0.095	0.086
Wang et al.	70	294	0.104	0.066
Sun et al.	20	162	0.148	0.036
Du et al.	199	335	0.174	0.089
Gao et al.	246	375	0.174	0.036
Wu et al.	19	47	0.182	0.231
Garfinkel et al.	54	93	0.207	0.046
Fontham et al.	90	163	0.231	0.01
Akiba et al.	22	47	0.419	0.08
Brownson et al.	90	116	0.419	0.484
Koo et al.	144	731	0.438	0.077
Stockwell et al.	417	602	0.47	0.114
Kalandidi et al.	54	202	0.482	0.09
Lam et al.	23	45	0.501	0.032
Liu et al.	431	1,166	0.507	0.176
Zaridze et al.	210	301	0.507	0.04
Lam	75	128	0.698	0.098
Correa et al.	38	69	0.728	0.227
Trichopoulos et al.	651	1,253	0.756	0.089
Geng et al.	67	173	0.77	0.124
Jockel	162	285	0.82	0.317
Humble et al.	230	230	0.85	0.293
Inoue et al.	135	135	0.936	0.398

The table provides the total sample sizes for the group of non-smoking women whose spouses smoked, the group of non-smoking women whose spouses did not smoke, the odds-ratio, and the 95% confidence interval for the odds-ratio. The odds-ratio is the ratio of the odds of being diagnosed with lung cancer given exposure to secondhand smoking to the odds of being diagnosed with lung cancer given no exposure to secondhand smoke. In all but six of the studies, the odds of non-smoking women being diagnosed with lung cancer were higher when they had a spouse who smoked versus non-smoking women whose spouse did not smoke (Table 11.3).

### 11.3 Eagly et al. (2003) Meta-analysis on Gender Differences in Transformational Leadership

The data in Table 11.4 is adapted from a meta-analysis by Eagly et al. (2003) focusing on gender differences in transformational, transactional and laissez-faire leadership styles. Eagly et al. found that female leaders were more transformational than male leaders, while men tended to use more transactional and laissez-faire types than women. In the examples in the rest of the text using this data, we focus on gender differences in transformational leadership, using characteristics of studies as potential moderators of this gender difference: (a) publication year, (b) average age of the participants, (c) percentage of males in leadership roles in the organization studied, (d) whether the first author is female (1 = female, 0 = male), (e) size of the organization (0 = small, 1 = mixed, 2 = large), (f) whether random selection was used (0 = random, 1 = unsuccessful random, 2 = nonrandom).

**Table 11.4** Selected cases from Eagly et al. (2003)

Case	Male N	Female N	Effect size	Variance	Pub year	Age	% male leaders	Female 1st author	Size of org	Random selection
AMA1	963	149	-0.16	0.007761	2001		85	1.00	1.00	1.00
AMA2	613	421	-0.14	0.004016	2001		58	1.00	1.00	2.00
Ay	58	51	-0.19	0.037015	2000			1.00	1.00	1.00
B1	15	8	-0.37	0.194643	1985		65	0.00	2.00	2.00
B2	29	16	-0.24	0.097623	1985		64	0.00	1.00	2.00
B21	574	303	-0.26	0.005081	1996		66	0.00	2.00	2.00
B22	164	107	-0.23	0.015541	1996		60	0.00	1.00	0.00
B23	420	493	-0.09	0.004414	1996	43	46	0.00	1.00	2.00
BJ	112	77	-0.10	0.021942	2000	39		1.00	1.00	1.00
BO	30	31	-0.62	0.068742	1994	50	49	1.00	2.00	1.00
CA	368	240	-0.17	0.006908	1998	38	61	1.00	2.00	1.00
CH	209	111	-0.22	0.013869	1996	45	65	0.00	1.00	1.00
CLS	6,098	2,856	-0.11	0.000515	2000			0.00	1.00	2.00
CU	65	53	-0.17	0.034375	2002	38		1.00	1.00	2.00
CW	456	50	0.61	0.022561	1998	49	90	0.00	2.00	2.00
CW	1,236	132	0.20	0.008399	1999	44	90	0.00	2.00	0.00
DA	27	24	-0.15	0.078924	1996	50		1.00	2.00	2.00
DF	130	72	-0.25	0.021736	1997	49	64	1.00	2.00	2.00
ER	821	699	-0.06	0.002650	1998			1.00	1.00	1.00
EV	16	109	-0.43	0.072414	1997		28	0.00	2.00	0.00
FL	116	77	-0.47	0.022180	1997		90	1.00	1.00	1.00
GM	92	19	-0.10	0.063546	2000	46	83	1.00	2.00	2.00
GO	128	26	-0.25	0.046477	1999		83	1.00	2.00	1.00
HI	29	11	-0.36	0.127012	2000	49	73	1.00	2.00	1.00
JB	134	160	-0.13	0.013741	2000	39	46	0.00	1.00	1.00
JL	288	135	-0.29	0.010979	1996	49	68	1.00	2.00	1.00
JO	6	5	-0.04	0.366739	1992		55	1.00	0.00	0.00

(continued)

**Table 11.4** (continued)

Case	Male N	Female N	Effect size	Variance	Pub year	Age	% male leaders	Female 1st author	Size of org	Random selection
KO	296	383	0.31	0.006060	1991	28	42	1.00	2.00	0.00
KP	4,571	1,267	0.04	0.001008	1995		78	0.00	1.00	2.00
KUG	34	7	-0.31	0.173441	1999	35	77	0.00	2.00	1.00
KUU	73	31	0.09	0.045996	1999	55	70	0.00	2.00	1.00
LAN	7	9	-0.26	0.256081	1996			1.00	1.00	2.00
LAV	39	22	-0.33	0.071988	1998		64	1.00	2.00	1.00
LJ	965	288	-0.35	0.004557	1997	59	77	0.00	2.00	1.00
MA	44	59	-0.08	0.039707	2000	43	43	1.00	0.00	1.00
MCG	42	32	-0.72	0.058562	1997	48	57	0.00	2.00	1.00
PO	192	26	-0.27	0.043837	1998		88	1.00	1.00	1.00
RH	229	316	-0.36	0.007650	1996	41	42	1.00	2.00	1.00
RO	29	67	-0.44	0.050416	1993	48	88	1.00	2.00	2.00
SM	112	14	0.00	0.080357	1999	46	85	0.00	2.00	1.00
SP	326	204	-0.21	0.008011	2000	41	62	1.00	2.00	1.00
ST	247	81	0.01	0.016394	2000		74	1.00	0.00	1.00
WH	14	29	0.12	0.106079	2000		33	1.00	2.00	1.00
WI	29	55	-0.87	0.057170	1999	50	35	0.00	2.00	0.00

## References

- Eagly, A.H., M.C. Johannesen-Schmidt, and M.L. van Engen. 2003. Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin* 129(4): 569–592.
- Hackshaw, A.K., M.R. Law, and N.J. Wald. 1997. The accumulated evidence on lung cancer and environmentally tobacco smoke. *British Medical Journal* 315(7114): 980–988.
- Sirin, S.R. 2005. Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research* 75(3): 417–453. doi:[10.3102/00346543075003417](https://doi.org/10.3102/00346543075003417).