Summary of Study Characteristics and the Cross-Sectional Association Between Loneliness and Social Anxiety

Source	No. of participants	Proportion male	Mean age	Age range	Country	Geographical representation	Clinical status	Socioeconomic status	Ethnic majority / minority	Loneliness questionnaire	Social anxiety questionnaire	Social anxiety type	*r*
Alfano et al. (2009)	88	0.51	11.20	7-17	US	>1 city, 1 area	clincal (mental)	NA	mixed minority/majority	CLS	SPAI	general social anxiety	0.32
Arbeau et al. (2012)	328	0.53	9.45	8-12	CA	1 city	non-clinical	>75% middle/high SES	>75% majority	CLS	SAS-A/-C	general social anxiety	0.41
Bagner et al. (2007)	215	0.24	21.14	17-36	US	1 city	non-clinical	NA	mixed minority/majority	UCLA	SAS-A/-C	general social anxiety	0.58
Battistich et al. (1993)	107	NA	NA	NA	US	1 city	non-clinical	>75% middle/high SES	>75% majority	CLS	SAS-A/-C	general social anxiety	0.44
Brown et al. (2006)	58	0.43	11.80	8-18	US	>1 city, 1 area	clinical (physical)	>75% low SES	>75% minority	CLS	SAS-A/-C	general social anxiety	0.53
Caplan (2007)	343	0.30	19.40	18-28	US	NA	non-clinical	NA	NA	UCLA	SADS	social avoidance and distress	0.64
Cavanaugh & Buehler (2016)	416	0.49	11.86	11-14	US	>1 city, 1 area	non-clinical	>75% middle/high SES	>75% majority	UCLA	SAS-A/-C	general social anxiety	0.53
Chen & Graham (2012)	1106	0.44	17.93	NA	US	1 city	non-clinical	NA	>75% minority	CLS	SAS-A/-C	general social anxiety	0.57
Clayton et al. (2013)	229	0.26	18.19	18-21	US	1 city	non-clinical	NA	mixed minority/majority	UCLA	SCS	general social anxiety	0.47
Cohen & Kendall (2015)	79	0.52	11.06	6-17	US	NA	clinical (mental)	>75% middle/high SES	>75% majority	CLS	Other	general social anxiety	0.55
Coplan et al. (2013)	352	0.49	10.16	9-12	CA	>1 city, 1 area	non-clinical	>75% middle/high SES	>75% majority	CLS	SAS-A/-C	general social anxiety	0.67
Crick & Bigbee (1998)	383	0.51	NA	NA	US	>1 city, 1 area	non-clinical	NA	>75% majority	CLS	SASA	social avoidance and distress	0.55
										CLS	SASA	general social anxiety	0.42
Crick & Ladd (1993)	339	0.53	10.42	NA	US	>1 city, 1 area	non-clinical	NA	NA	CLS	SASA	general social anxiety	0.25
Crick & Nelson	496	0.49	NA	NA	US	>1 city, 1 area	non-clinical	NA	>75% majority	CLS	SASA	general social anxiety	0.35
Damsteegt (1992)	60	0.33	NA	NA	US	1 city	non-clinical	NA	NA	UCLA	Other	social anxiety-shyness	0.49
Dempsey & Storch (2008)	205	0.20	19.98	18-25	US	1 city	non-clinical	NA	mixed minority/majority	UCLA	FNE	fear of negative evaluation	0.21
DeRosier & Mercer (2009)	1193	0.49	NA	NA	US	>1 city, 1 area	non-clinical	NA	mixed minority/majority	CLS	SAS-A/-C	general social anxiety	0.55
Devine et al. (2008)	33	0.53	12.60	NA	US	NA	clinical (physical)	NA	>75% majority	CLS	SAS-A/-C	general social anxiety	0.41
Erath et al. (2010)	383	0.43	12.70	11-14	US	1 city	non-clinical	NA	>75% majority	CLS	SAS-A/-C	general social anxiety	0.53
Eronen & Nurmi (2001)	154	0.63	24.30	18-40	FI	NA	non-clinical	NA	>75% majority	UCLA	Other	social avoidance and distress	0.62
Fergus et al. (2009)	492	0.56	18.90	NA	US	1 city	non-clinical	NA	>75% majority	UCLA	Other	general social anxiety	0.55
										UCLA	FNE	fear of negative evaluation	0.44
										UCLA	SIAS	general social anxiety	0.57
Findlay et al. (2009)	355	0.51	10.10	NA	CA	>1 city, 1 area	non-clinical	mixed SES	NA	CLS	SAS-A/-C	general social anxiety	0.50
Finkel et al. (2003)	86	0.44	11.80	NA	US	NA	non-clinical	>75% middle/high SES	mixed minority/majority	CLS	SAS-A/-C	social avoidance and distress	0.45
										CLS	SAS-A/-C	fear of negative evaluation	0.51
Forgeron et al. (2011)	107	0.21	15.15	13-18	CA	NA	mixed (physical)	NA	NA	CLS	SAS-A/-C	general social anxiety	0.62
Forgeron et al. (2015)	144	0.05	16.90	12-20	CA	>1 area	clinical (physical)	NA	NA	CLS	SAS-A/-C	general social anxiety	-0.75
Gable (2006), study 1	155	0.27	NA	NA	US	1 city	non-clinical	NA	NA	UCLA	Other	fear of negative evaluation	0.33
Gable (2006), study 2	73	0.34	18.81	NA	US	1 city	non-clinical	NA	mixed minority/majority	UCLA	Other	fear of negative evaluation	0.22
Gallagher et al. (2014)	124	0.28	13.51	12-15	US	1 city	clinical (mental)	>75% middle/high SES	>75% majority	CLS	SAS-A/-C	general social anxiety	0.59
Gordon et al. (2007)	312	0.33	21.34	18-49	US	1 city	non-clinical	NA	mixed minority/majority	UCLA	SAS-A/-C	general social anxiety	0.36
Graham & Juvonen (1998)	418	0.49	12.40	NA	US	1 city	non-clinical	NA	mixed minority/majority	CLS	Other	fear of negative evaluation	0.36
Graham & Juvonen (2002)	406	NA	12.40	NA	US	1 city	non-clinical	>75% low SES	mixed minority/majority	CLS	Other	fear of negative evaluation	0.36
Graham et al. (2006)	1985	0.46	11.50	NA	US	1 city	non-clinical	>75% low SES	mixed minority/majority	CLS	SAS-A/-C	general social anxiety	0.51
Gross (2004)	229	0.38	13.50	NA	US	1 city	non-clinical	>75% middle/high SES	mixed minority/majority	UCLA	SAS-A/-C	social avoidance and distress	0.69
Gross et al. (2002)	130	0.38	12.11	11-13	US	1 city	non-clinical	>75% middle/high SES	mixed minority/majority	UCLA	SAS-A/-C	social avoidance and distress	0.56
Hays & DiMatteo (1987)	180	0.38	21.00	17-48	US	1 city	non-clinical	NA	mixed minority/majority	UCLA	SCS	general social anxiety	0.49
Huan et al. (2014)	681	0.50	14.55	NA	SG	1 city	non-clinical	NA	>75% majority	UCLA	SAS-A/-C	general social anxiety	0.51
Hutcherson & Epkins (2009)	100	0.00	10.52	8-12	US	1 city	non-clinical	>75% middle/high SES	>75% majority	CLS	SAS-A/-C	general social anxiety	0.65
Inderbitzen-Pisaruk et al. (1992)	186	0.58	14.60	13-16	US	1 city	non-clinical	NA	NA	UCLA	FNE	fear of negative evaluation	0.11
										UCLA	IAS	general social anxiety	0.37
Jackson (2007), study 1	281	0.31	14.53	12-17	AU	1 city	non-clinical	NA	NA	UCLA	FNE	fear of negative evaluation	0.26
										UCLA	IAS	general social anxiety	0.44
Jackson (2007), study 2	170	0.26	22.49	NA	AU	1 city	non-clinical	NA	NA	UCLA	FNE	fear of negative evaluation	0.59

									UCLA	IAS	general social anxiety	0.56
Johnson et al. (2001a)	124	0.44	19.57	17-21	US	1 city	non-clinical	>75% middle/high SES	>75% majority	UCLA	SASA	general social anxiety	0.58
Johnson et al. (2001b)	106	0.50	11.55	9-14	US	1 city	non-clinical	>75% middle/high SES	>75% majority	UCLA	SASA	general social anxiety	0.49
Johnson et al. (2006)	286	0.35	20.73	18-30	US	1 city	non-clinical	>75% middle/high SES	>75% majority	UCLA	SASA	general social anxiety	0.50
Johnson et al. (2012)	295	0.32	19.21	18-21	US	1 city	non-clinical	NA	>75% majority	UCLA	SASA	general social anxiety	0.30
Jones et al. (1981)	58	NA	NA	NA	US	1 city	non-clinical	NA	NA	UCLA	SCS	general social anxiety	0.45
Jones et al. (1985)	591	0.36	19.59	NA	US	1 city	non-clinical	NA	NA	UCLA	Other	general social anxiety	0.26
Jones et al. (1986)	155	0.41	19.90	NA	US	NA	non-clinical	NA	>75% majority	UCLA	SADS	social avoidance and distress	0.54
										UCLA	IAS	general social anxiety	0.47
Lamport & Zlomke (2014)	197	0.29	21.48	17-88	US	1 city	non-clinical	NA	mixed minority/majority	UCLA	FNE	fear of negative evaluation	0.22
										UCLA	SIAS	general social anxiety	0.22
LaRose & Tsai (2014)	1522	0.41	17.70	NA	US	1 city	non-clinical	>75% middle/high SES	>75% majority	UCLA	IAS	general social anxiety	0.47
Lasgaard et al. (2011)	1009	0.43	17.11	NA	DK	>1 area	non-clinical	NA	>75% majority	SELSA family	SIAS	general social anxiety	0.28
										SELSA romantic	SIAS	general social anxiety	0.24
										SELSA social	SIAS	general social anxiety	0.40
London et al. (2007)	150	0.51	NA	NA	US	1 city	non-clinical	NA	>75% majority	CLS	Other	social avoidance and distress	0.28
										CLS	Other	general social anxiety	0.42
MacEvoy et al. (2016)	499	0.48	9.88	8-12	US	1 city	non-clinical	>75% middle/high SES	>75% majority	CLS	SAS-A/-C	fear of negative evaluation	0.56
Michael et al. (2014)	5147	0.49	10.62	NA	US	>1 area	non-clinical	mixed SES	>75% minority	CLS	SAS-A/-C	fear of negative evaluation	0.33
Moore & Schultz (1983)	99	0.46	17.00	14-19	US	1 city	non-clinical	NA	NA	UCLA	SCS	general social anxiety	0.41
Neezlek & Derks (2001)	286	0.43	NA	NA	US	1 city	non-clinical	NA	NA	UCLA	IAS	general social anxiety	0.36
Neto (1992)	217	0.46	14.70	14-17	PT	1 city	non-clinical	NA	NA	UCLA	SCS	general social anxiety	0.47
Neto (2001)	109	0.34	16.70	15-18	FR	1 city	non-clinical	NA	>75% minority	UCLA	SCS	general social anxiety	0.19
Neto & Barros (2000), study 1	487	0.47	17.62	NA	PT, CV	>1 area	non-clinical	NA	NA	UCLA	SCS	general social anxiety	0.34
Neto & Barros (2000), study 2	246	0.00	22.26	NA	PT, CV	>1 area	non-clinical	NA	NA	UCLA	SCS	general social anxiety	0.33
Nikitin et al. (2012)	76	0.25	21.59	18-30	CH, DE	>1 area	non-clinical	NA	>75% majority	UCLA	FNE	fear of negative evaluation	0.62
Polo & Lopez (2009)	161	0.50	13.20	12-15	US	>1 city, 1 area	non-clinical	>75% low SES	>75% minority	CLS	SPAI	general social anxiety	0.42
Preston et al. (2005	22	0.91	12.80	8-18	US	NA	clinical (physical)	NA	>75% majority	CLS	SAS-A/-C	general social anxiety	0.48
Prinstein & La Greca (2002)	246	0.55	10.77	NA	US	>1 city, 1 area	non-clinical	mixed SES	mixed minority/majority	CLS	SAS-A/-C	general social anxiety	0.60
Ralph & Epkins (2015)	116	0.00	9.97	9-11	US	NA	non-clinical	>75% middle/high SES	>75% majority	PNDLS dyadic	SAS-A/-C	general social anxiety	0.37
										PNDLS network	SAS-A/-C	general social anxiety	0.56
Reid & Reid (2010)	635	0.34	23.30	16-55	UK, US, EU	>1 area	non-clinical	NA	NA	UCLA	IAS	general social anxiety	0.58
Romero & Epkins (2008)	100	0.00	10.20	9-12	US	NA	non-clinical	>75% middle/high SES	mixed minority/majority	CLS	SAS-A/-C	general social anxiety	0.55
Rowe et al. (2015)	601	0.51	11.00	9-13	AU	NA	non-clinical	NA	>75% majority	CLS	SAS-A/-C	general social anxiety	0.54
Sarason et al. (1987)	199	0.37	NA	NA	US	1 city	non-clinical	NA	NA	UCLA	Other	general social anxiety	0.45
Schmitt & Kurdet (1985)	156	0.46	18.55	NA	US	NA	non-clinical	NA	>75% majority	DLS community	SCS	general social anxiety	0.29
										DLS family	SCS	general social anxiety	0.30
										DLS friends	SCS	general social anxiety	0.23
										DLS romantic	SCS	general social anxiety	0.21
Shanmugam et al. (2014), study 1	152	0.38	20.08	18-31	UK	NA	non-clinical	NA	>75% majority	UCLA	FNE	fear of negative evaluation	0.25
Shanmugam et al. (2014), study 2	147	0.26	20.78	18-39	UK	NA	non-clinical	NA	>75% majority	UCLA	FNE	fear of negative evaluation	0.34
Shim & Finch (2014)	446	0.46	NA	NA	US	>1 city, 1 area	non-clinical	mixed SES	mixed minority/majority	CLS	Other	general social anxiety	0.14
Shim et al. (2013)	373	0.46	NA	NA	US	>1 city, 1 area	non-clinical	mixed SES	mixed minority/majority	CLS	Other	general social anxiety	0.10
Shin (2010)	605	0.54	NA	NA	KR	1 city	non-clinical	>75% middle/high SES	NA	CLS	Other	fear of negative evaluation	0.53
Spitzberg & Hurt (1987)	160	NA	NA	NA	US	1 city	non-clinical	NA	NA	UCLA	Other	general social anxiety	0.35
Starr & Davila (2008)	80	0.00	13.46	NA	US	1 city	non-clinical	mixed SES	>75% majority	UCLA	SAS-A/-C	general social anxiety	0.64
										UCLA	Other	general social anxiety	0.28
Stednitz & Epkins (2006)	102	0.00	10.46	9-12	US	NA	non-clinical	>75% middle/high SES	mixed minority/majority	CLS	SAS-A/-C	general social anxiety	0.72
Stoeckli (2009)	704	0.44	11.62	NA	CH	>1 area	non-clinical	NA	mixed minority/majority	CLS	Other	general social anxiety	0.48
Storch & Masia-Warner (2004)	552	0.00	14.80	13-17	US	1 city	non-clinical	NA	>75% majority	CLS	SAS-A/-C	fear of negative evaluation	0.51

										CLS	SAS-A/-C	social avoidance and distress	0.47
										CLS	SAS-A/-C	social avoidance and distress	0.52
Storch et al. (2003)	383	0.38	14.30	13-16	US	1 city	non-clinical	>75% middle/high SES	>75% majority	CLS	Other	fear of negative evaluation	0.45
										CLS	Other	physiological symptoms	0.37
										CLS	Other	social avoidance and distress	0.38
Storch et al. (2003)	186	0.46	10.83	10-13	US	1 city	non-clinical	>75% low SES	>75% minority	CLS	SAS-A/-C	social avoidance and distress	0.38
										CLS	SAS-A/-C	social avoidance and distress	0.45
										CLS	SAS-A/-C	fear of negative evaluation	0.47
Storch et al. (2004)	93	0.52	13.20	8-18	US	NA	clinical (physical)	NA	>75% majority	CLS	SAS-A/-C	general social anxiety	0.54
Storch, Bagner et al. (2004)	303	0.28	21.20	17-41	US	1 city	non-clinical	NA	mixed minority/majority	UCLA	SAS-A/-C	general social anxiety	0.56
Storch, Bravata et al. (2003)	226	0.26	20.30	17-30	US	1 city	non-clinical	NA	>75% majority	UCLA	FNE	fear of negative evaluation	0.29
Storch, Roth et al. (2004)	414	0.27	20.52	NA	US	NA	non-clinical	NA	>75% majority	UCLA	FNE	fear of negative evaluation	0.33
Strawser et al. (2005)	303	0.30	21.62	18-52	US	1 city	non-clinical	NA	mixed minority/majority	UCLA	SPAI	general social anxiety	0.28
										UCLA	FNE	fear of negative evaluation	0.42
Subasi (2005)	346	0.44	NA	NA	TR	1 city	non-clinical	NA	NA	UCLA	IAS	general social anxiety	0.55
Summerfeldt et al. (2006)	1798	0.29	19.98	NA	CA	1 city	non-clinical	NA	NA	UCLA	SIAS	general social anxiety	0.65
										UCLA	Other	social performance anxiety	0.46
Timpano et al. (2014)	144	0.33	18.90	18-33	US	1 city	non-clinical	NA	>75% majority	UCLA	SIAS	general social anxiety	0.53
Valentiner et al. (2011)	93	0.34	18.80	18+	US	1 city	non-clinical	>75% middle/high SES	mixed minority/majority	UCLA	Other	social performance anxiety	0.59
										UCLA	SIAS	general social anxiety	0.61
Valkenburg & Peter (2007)	638	0.51	13.31	10-16	NL	NA	non-clinical	NA	NA	UCLA	SAS-A/-C	social avoidance and distress	0.25
Valkenburg & Peter (2008)	1158	0.50	NA	10-17	NL	>1 area	non-clinical	NA	NA	UCLA	SAS-A/-C	social avoidance and distress	0.56
Van den Eijnden et al. (2014)	836	0.50	13.20	11-15	NL	>1 area	non-clinical	NA	>75% majority	UCLA	SAS-A/-C	social avoidance and distress	0.43
Van Roekel et al. (2014)	272	0.41	14.19	13-16	NL	NA	non-clinical	NA	>75% majority	LACA peers	Other	general social anxiety	0.63
Van Rooij et al. (2012)	2894	0.62	14.30	13-16	NL	>1 area	non-clinical	NA	NA	UCLA	SAS-A/-C	general social anxiety	0.47
Vanhalst et al. (2013)	389	0.53	15.22	13-16	NL	>1 area	non-clinical	mixed SES	NA	LACA peers	Other	general social anxiety	0.47
Vogel-Walcutt et al. (2011)	40	0.50	9.28	8-11	US	>1 area	mixed (physical)	NA	mixed minority/majority	CLS	Other	general social anxiety	0.29
Watson & Nesdale (2012)	188	0.27	23.20	NA	AU	1 city	non-clinical	NA	NA	UCLA	SADS	social avoidance and distress	0.68
Wesselmann et al. (2012)	91	0.64	19.19	NA	US	1 city	non-clinical	NA	mixed minority/majority	UCLA	SADS	social avoidance and distress	0.32
Xu & Zhang (2008)	114	0.52	10.13	NA	CN	1 city	non-clinical	NA	NA	CLS	Other	fear of negative evaluation	0.31
Xu et al. (2007)	388	0.48	10.70	NA	CN	1 city	non-clinical	NA	NA	CLS	Other	fear of negative evaluation	0.35
Zhao et al. (2014)	82	0.51	11.84	10-16	CN	1 city	non-clinical	NA	>75% majority	CLS	SAS-A/-C	general social anxiety	0.54

Note . NA = not available (i.e., the information was not reported in the original study). The country abbreviations are the ISO alpha-2 country codes. CLS = Children's Loneliness Scale; DLS = Differential Loneliness Scale; LACA = Loneliness and Aloneness Scale for Children and Adolescents; PNDLS = Peer Network and Dyadic Loneliness Scale; SELSA = Social and Emotional Loneliness Scale for Adults; UCLA = UCLA Loneliness Scale. FNE = Fear of Negative Evaluation Scale; IAS = Interaction Anxiousness Scale; SADS = Social Avoidance and Distress Scale; SASA = Social Anxiety and Social Avoidance Scale; SAS-A/-C = Social Anxiety Scale for Adolescents/Children; SCS = Self-Consciousness Scale; SIAS = Social Interaction Anxiety Scale; SPAI = Social Phobia and Anxiety Inventory.