

Table 1.

Characteristics of Included Studies

Authors	Year	N	Impact factor	Study quality	Type of measures	Type of outcome(s)	Physiological measure	Type setting	Intervention
Aba et al.	2017	186	1.379	Strong	psych	Anxiety	–	Med–proc	MA
Allen et al.	2000	40	4.580	Strong	phys	Stress	BP, HR	Surgery	MA
Ames et al.	2017	41	–	Strong	psych	Anxiety	–	Surgery	MA
Angioli et al.	2014	372	1.283	Moderate	phys, psych	Stress, Anxiety	BP, HR	Med–proc	MA
Bally et al.	2003	107	1.326	Strong	psych	Anxiety	–	Med–proc	MA
Bauer et al.	2010	80	2.050	Strong	psych	Stress	–	Med–proc	MT
Beck et al.	2015	20	0.800	Weak	phys, psych	Stress	Horm	Non–med	MT
Bekiroglu et al.	2013	60	1.935	Moderate	phys	Stress	BP	Med–proc	MA
Bringman et al.	2009	326	2.322	Moderate	phys, psych	Stress, Anxiety	BP, HR	Surgery	MA
Buffum et al.	2006	170	0.524	Weak	phys, psych	Stress, Anxiety	BP, HR	Surgery	MA
Bulfone et al.	2009	60	0.659	Moderate	psych	Anxiety	–	Med–proc	MA
Camara et al.	2008	203	1.170	Weak	phys	Stress	BP, HR	Surgery	MA
Cassileth et al.	2003	62	6.072	Moderate	psych	Anxiety	–	Med–proc	MT
Chan et al.	2006	43	1.197	Weak	phys	Stress	BP, HR	Med–proc	MA
Chen et al.	2012	73	1.754	Strong	psych	Anxiety	–	Med–proc	MA
Cutshall et al.	2011	100	1.243	Weak	phys, psych	Stress	BP, HR	Surgery	MA
Chang et al.	2015	76	1.426	Weak	phys	Stress	BP, HR	Med–proc	MA
Chang Yu, Chen & Chen	2015	296	1.545	Strong	psych	Stress	–	Med–proc	MA
Chang et al.	2008	236	1.255	Strong	psych	Stress	–	Med–proc	MA
De la Torre–Luque et al.	2017a	21	1.296	Strong	phys, psych	Stress, Anxiety	HR	Non–med	MA
De la Torre–Luque et al.	2017b	58	1.394	Strong	phys, psych	Stress, Anxiety	HR	Non–med	MA
DeMarco et al.	2012	26	–	Moderate	phys, psych	Stress, Anxiety	BP, HR	Surgery	MA
Di Nasso et al.	2016	100	2.807	Moderate	phys	Stress	BP, HR	Med–proc	MA
Doğan & Şenturan	2012	200	–	Strong	psych	Anxiety	–	Med–proc	MA
Doro et al.	2016	100	2.698	Moderate	psych	Anxiety	–	Med–proc	MT
Drzymalski et al.	2017	99	3.140	Moderate	phys	Stress	BP, HR	Med–proc	MA
El–Hassan et al.	2009	180	5.727	Weak	psych	Anxiety	–	Med–proc	MA
Elliott	1994	38	1.657	Strong	phys, psych	Stress, Anxiety	BP, HR	Med–proc	MA
Ghetti	2013	23	1.185	Moderate	phys, psych	Stress, Anxiety	BP, HR	Med–proc	MT
Ghezeljeh et al.	2017	92	0.801	Strong	psych	Anxiety	–	Med–proc	MA
Gomez–Urquiza et al.	2016	120	1.998	Moderate	phys, psych	Stress, Anxiety	BP, HR	Surgery	MA
Graversen & Sommer	2013	75	2.232	Weak	phys	Stress	Horm	Surgery	MA
Groener et al.	2015	35	1.555	Moderate	psych	Stress	–	Med–proc	MA
Gupta & Gupta	2015	60	1.900	Strong	phys, psych	Stress, Anxiety	BP, HR	Non–med	MA
Guzetta	1989	53	1.657	Strong	phys	Stress	HR	Med–proc	MA
Hamel	2001	101	1.326	Strong	phys, psych	Stress, Anxiety	BP, HR	Med–proc	MA
Hammer	1996	16	1.000	Strong	psych	Anxiety	–	Non–med	MT
Hamidi & Ozturk	2017	100	2.270	Strong	phys, psych	Stress, Anxiety	BP, HR	Med–proc	MA
Han et al.	2010	137	1.255	Strong	phys, psych	Stress, Anxiety	BP, HR	Surgery	MA

Horne–Thomson & Grocke	2008	25	2.023	Moderate	phys	Stress	HR	Non–med	MT
Hook et al.	2008	110	–	Strong	psych	Anxiety	–	Surgery	MA
Hsu et al.	2016	70	2.056	Moderate	psych	Anxiety	–	Med–proc	MA
Hayes et al.	2003	198	0.671	Weak	psych	Anxiety	–	Med–proc	MA
Jeppesen et al.	2016	143	–	Moderate	psych	Anxiety	–	Surgery	MA
Jiménez–Jiménez et al.	2013	40	0.211	Strong	phys	Stress	BP, HR, Horm	Surgery	MA
Johnson et al.	2012	119	0.662	Strong	psych	Anxiety	–	Surgery	MA
Kar et al.	2015	34	–	Moderate	phys	Stress	Horm	Surgery	MA
Ko et al.	2017	138	1.252	Weak	psych	Anxiety	–	Med–proc	MA
Kunikullaya et al.	2015	88	0.922	Strong	phys, psych	Stress, Anxiety	BP, HR, Horm	Med–proc	MA
Kushnir et al.	2012	60	1.264	Strong	phys	Stress	BP, HR	Surgery	MA
Lai & Li	2011	54	1.741	Strong	phys, psych	Stress	BP, HR, Horm	Non–med	MA
Lai et al.	2008	44	1.255	Strong	phys, psych	Stress, Anxiety	BP, HR	Med–proc	MA
Lai et al.	2013	60	1.814	Strong	phys	Stress	BP, HR	Non–med	MA
Latha et al.	2014	80	–	Moderate	phys	Stress	BP, HR	Non–med	MA
Leardi et al.	2007	60	5.596	Moderate	phys	Stress	Horm	Med–proc	MA
Lee et al.	2016	64	1.585	Moderate	phys, psych	Stress	BP	Non–med	MA
Lee et al.	2012	140	1.427	Strong	phys, psych	Stress, Anxiety	HR, HRV	Surgery	MA
Lee, Lai, Sung et al.	2017	85	2.344	Strong	phys, psych	Stress, Anxiety	BP, HR	Med–proc	MA
Lee, Lee, Hsu et al.	2017	85	1.549	Strong	phys, psych	Stress, Anxiety	BP, HR	Surgery	MA
Lee, Wu, Lee et al.	2017	100	2.013	Weak	phys, psych	Stress, Anxiety	BP, HR	Surgery	MA
Lin et al.	2011	98	1.384	Strong	psych	Anxiety	–	Med–proc	MA
Lin et al.	2012	88	1.604	Moderate	phys, psych	Stress	BP, HR	Med–proc	MA
López–Cepero Andrada	2004	118	2.253	Moderate	psych	Anxiety	–	Med–proc	MA
Mahdipour et al.	2012	150	–	Moderate	psych	Stress, Anxiety	–	Surgery	MA
Mandel et al.	2007	68	0.800	Weak	phys, psych	Stress, Anxiety	BP	Surgery	MT
Menegazzi et al.	1991	38	4.580	Weak	phys	Stress	BP, HR	Med–proc	MA
Ming et al.	2016	197	3.640	Strong	psych	Anxiety	–	Med–proc	MA
Miyata et al.	2016	42	–	Strong	phys, psych	Stress, Anxiety	HR	Med–proc	MA
Ni et al.	2011	172	1.384	Weak	phys, psych	Anxiety	BP, HR	Surgery	MA
Nilsson	2009	58	1.332	Strong	phys	Stress	BP, HR, Horm	Surgery	MA
Nilsson et al.	2005	75	3.634	Strong	phys	Stress, Anxiety	BP, HR, Horm	Surgery	MA
O’Callaghan et al.	2012	97	1.182	Moderate	psych	Anxiety	–	Med–proc	MA
Padam et al.	2017	132	0.810	Strong	phys, psych	Stress, Anxiety	BP, HR	Med–proc	MA
Pothoulaki et al.	2008	60	1.748	Weak	psych	Anxiety	–	Med–proc	MA
Radstaak et al.	2014	123	3.473	Strong	psych	Stress	–	Non–med	MA
Romito et al.	2013	62	0.769	Strong	psych	Stress, Anxiety	–	Med–proc	MT
Ripley et al.	2014	70	0.824	Moderate	phys	Stress	BP, HR	Med–proc	MA
Salehi et al.	2016	166	0.972	Strong	psych	Anxiety	–	Med–proc	MA
Sanal & Gorsev	2014	70	0.647	Weak	psych	Anxiety	–	Non–med	MA
Sendelbach et al.	2006	86	2.172	Moderate	phys, psych	Stress, Anxiety	–	Surgery	MA
Shabanloei et al.	2010	100	0.240	Moderate	psych	Anxiety	BP, HR	Med–proc	MA
Shin & Kim	2011	233	0.849	Moderate	psych	Stress, Anxiety	–	Med–proc	MA
Simavli et al.	2014	141	3.570	Moderate	psych	Anxiety	–	Med–proc	MA
Smith	2008	80	–	Weak	psych	Anxiety	–	Non–med	MT
Solomon & Ridgeway	2016	66	3.560	Moderate	psych	Anxiety	–	Med–proc	MA
Soo et al.	2016	80	2.993	Strong	psych	Anxiety	–	Med–proc	MA
Stein et al.	2010	56	0.622	Weak	psych	Stress, Anxiety	–	Surgery	MA
Su et al.	2013	28	1.917	Moderate	phys	Stress	–	Surgery	MA

Tabrizi et al.	2012	90	1.292	Weak	phys	Stress	BP, HR, Horm	Surgery	MA
Tan et al.	2015	100	1.158	Moderate	phys	Stress	BP, HR	Med-proc	MA
Thoma et al.	2015	92	2.130	Weak	psych	Anxiety	–	Med-proc	MA
Toker & Kömürcü	2017	70	2.013	Moderate	psych	Anxiety	–	Med-proc	MA
Triller et al.	2006	200	2.651	Moderate	phys	Stress	BP, HR	Med-proc	MA
Uedo et al.	2004	29	0.930	Moderate	phys	Stress	Horm	Med-proc	MA
Vachiramon et al.	2013	100	1.936	Strong	psych	Anxiety	–	Surgery	MA
Voss et al.	2004	61	5.836	Strong	psych	Stress, Anxiety	–	Surgery	MA
Wang et al.	2015	60	1.395	Strong	phys, psych	Stress, Anxiety	BP, HR	Surgery	MT
Warth et al.	2016	84	2.649	Strong	phys, psych	Stress	HRV	Med-proc	MT
White	1992	40	0.766	Strong	phys, psych	Anxiety	BP, HR	Surgery	MA
Wiwatwongwana et al.	2016	91	2.275	Strong	phys, psych	Stress, Anxiety	BP, HR	Surgery	MA
Yeo et al.	2008	70	1.710	Weak	phys	Stress	BP, HR	Med-proc	MA
Zengin et al.	2013	100	1.935	Weak	phys	Stress	BP, HR, Horm	Med-proc	MA
Zhang et al.	2014	124	0.680	Strong	psych	Anxiety	–	Med-proc	MA

Note: psych = psychological stress-related outcomes; phys = physiological stress-related outcomes; BP = blood pressure; HR = heart rate; Horm = hormone levels; HRV = heart rate variability; MA = music activity; MT = music therapy.

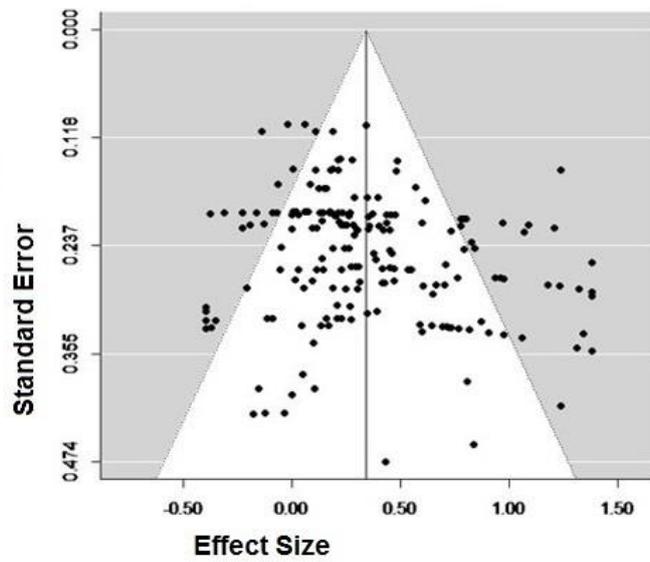


Figure 2. Trim-and-fill plot of the effects of music interventions on physiological stress-related outcomes.

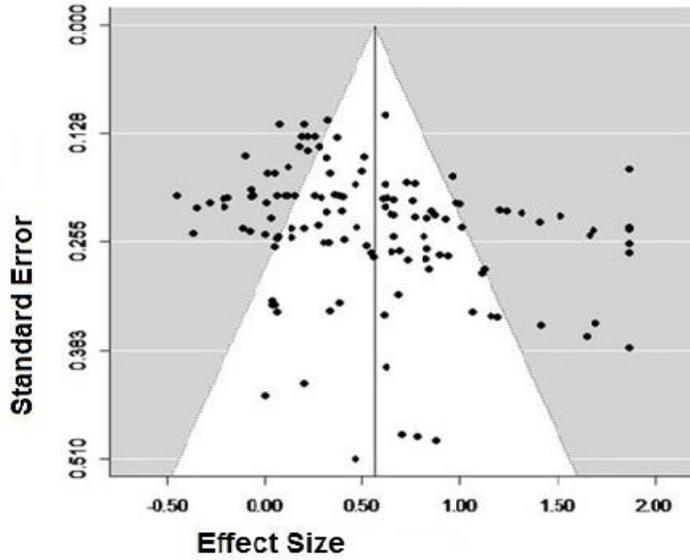


Figure 3. Trim-and-fill plot for the effects of music interventions on psychological stress-related outcomes.

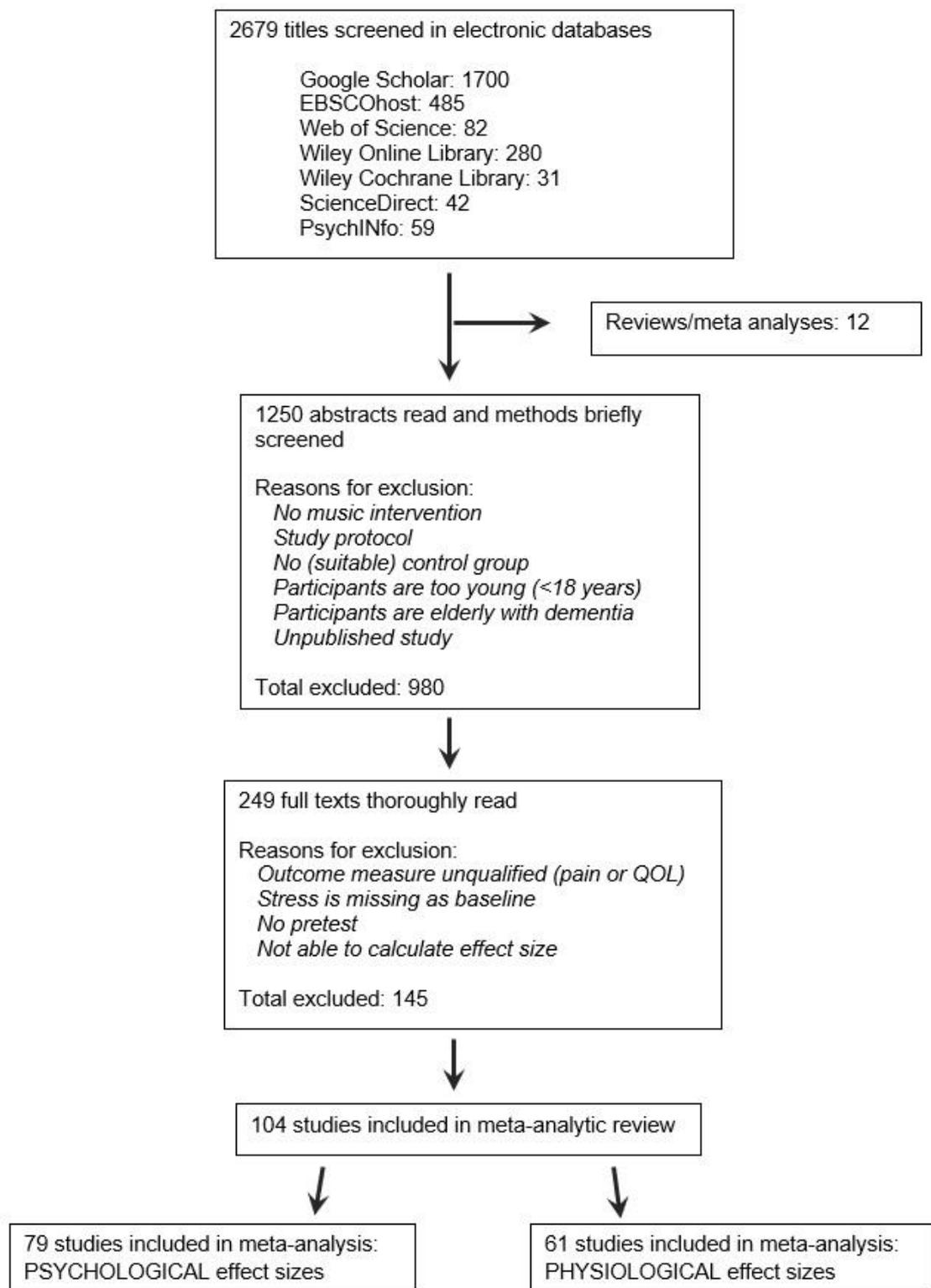


Figure 1. Flow chart of the search results.