

**Supplementary Table 4: Quality assessment of included studies**

First author and year	DOI	1. Research objective	2. Inclusion/exclusion criteria	3. Population parameters	4. Details on MS assessments	5. Details on wearables	6. Appropriate statistical analysis	7. Reporting of the strength of the results	8. Public data and/or code	9. Limitations
Ng et al, 1997	10.1097/00005768-199704000-00014	yes	yes	yes	yes	yes	yes	yes	no	yes
Motl et al, 2006	10.1207/S15324796ABM3202_13	yes	yes	yes	applies partially	applies partially	applies partially	yes	no	yes
Motl et al, 2006	10.1002/NUR.20161	yes	yes	yes	applies partially	applies partially	applies partially	yes	no	yes
Motl et al, 2006	10.1080/09638280600551476	yes	no	yes	yes	yes	yes	yes	no	yes
Motl et al, 2007	10.1037/0090-5550.52.4.463	yes	no	yes	applies partially	applies partially	applies partially	yes	no	yes
Kos et al, 2007	10.1080/07420520701282364	yes	yes	yes	applies partially	yes	applies partially	yes	no	yes
Gosney et al, 2007	10.1097/01.FCH.0000264411.20766.0C	yes	no	yes	applies partially	yes	yes	yes	no	no
Motl et al, 2007	10.1037/0090-5550.52.2.143	yes	yes	yes	applies partially	applies partially	applies partially	yes	no	yes
Hale et al, 2007	10.1682/JRRD.2005.09.0155	yes	yes	yes	yes	applies partially	yes	yes	no	yes
Motl et al, 2007	10.1123/APAQ.24.3.245	yes	yes	yes	applies partially	yes	yes	yes	no	yes
Kayes et al, 2007	10.1177/0269215507075516	yes	applies partially	yes	no	yes	applies partially	yes	no	yes
Klassen et al, 2008	10.1177/0269215507082740	yes	yes	yes	applies partially	yes	yes	yes	no	yes
Motl et al, 2008	10.1016/J.JNS.2007.11.003	yes	no	yes	yes	applies partially	applies partially	yes	no	yes
Motl et al, 2008	10.1007/S12160-008-9049-4	yes	yes	yes	applies partially	applies partially	applies partially	yes	no	yes
Hale et al, 2008	10.1016/J.APMR.2008.02.027	yes	yes	yes	no	yes	applies partially	yes	no	yes
Snook et al, 2008	10.1016/J.JPAINSYMMAN.2007.09.007	yes	applies partially	yes	yes	yes	applies partially	yes	no	yes
Motl et al, 2008	10.1097/NMD.0B013E318177351B	yes	no	yes	yes	applies partially	applies partially	yes	no	yes
Motl et al, 2009	10.1016/J.APMR.2009.03.020	yes	yes	yes	yes	yes	applies partially	yes	no	yes
Motl et al, 2009	10.1016/J.JNS.2009.06.015	yes	applies partially	no	yes	applies partially	applies partially	yes	no	no
Kayes et al, 2009	10.1016/J.APMR.2008.10.012	yes	yes	yes	applies partially	yes	applies partially	yes	no	yes
Motl et al, 2009	10.1037/A0015770	yes	yes	yes	applies partially	yes	applies partially	yes	no	yes
Motl et al, 2009	10.1037/A0015985	yes	yes	yes	yes	applies partially	yes	yes	no	yes
Motl et al, 2009	10.1080/13548500802241902	yes	yes	yes	applies partially	applies partially	yes	yes	no	yes
Motl et al, 2009	10.1097/MRR.0B013E328325A5ED	yes	yes		applies partially	applies partially	yes	yes	no	yes

Motl et al, 2009	10.1016/J.JPAINSYMMA.2008.08.004	yes	yes	yes	applies partially	applies partially	yes applies partially	yes	no	yes
Snook et al, 2009	10.1177/0269215508101757	yes	yes	yes	yes	yes	yes partially	yes	no	yes
Motl et al, 2010	10.1016/J.APMR.2010.08.011	yes	yes	yes	yes	yes	yes applies partially	yes	no	yes
Weikert et al, 2010	10.1016/J.JNS.2009.12.021	yes	yes	yes	yes	yes	yes partially	yes	no	yes
Motl et al, 2010	10.1016/J.MEDENGPY.2010.08.015	yes	yes	yes	yes	yes	yes	yes	no	yes
Rietberg et al, 2010	10.1016/J.APMR.2010.07.018	yes	yes	yes	yes applies partially	yes applies partially	yes applies partially	yes applies partially	no	yes
Suh et al, 2010	10.1016/J.DHJO.2009.09.002	yes	no	yes	yes partially	yes partially	yes partially	yes partially	no	yes
Gijbels et al, 2010	10.1177/1352458510361357	yes	yes	yes	yes	yes	yes applies partially	yes	no	yes
Sosnoff et al, 2010	10.1177/1352458510373111	yes	yes	yes	yes	yes	yes partially applies partially	yes	no	yes
Motl et al, 2010	10.1097/NMD.0B013E3181D14131	yes	yes	yes	yes	yes	yes partially	yes	no	yes
Alaqtash et al, 2011	10.1016/J.ENGAPPAI.2011.04.010	yes	no	yes	no	yes	no	yes	no	no
Motl et al, 2011	10.1080/08964289.2011.636769	yes	yes	yes	yes	yes	applies partially applies partially	yes	no	yes
Schlesinger et al, 2011	10.1055/S-0031-1271750	yes	yes	yes	no	yes	applies partially applies partially	yes	no	no
Grčić et al, 2011	10.12659/MSM.882130	yes	yes	yes	yes	yes	applies partially applies partially	yes	no	yes
Weikert et al, 2011	10.7224/1537-2073-13.4.170	yes	yes	yes	yes applies partially	yes	applies partially applies partially	yes applies partially	no	yes
Schmidt et al, 2011	10.1519/JPT.0B013E31820AA921	yes	yes	yes	yes partially	yes	applies partially applies partially	yes partially	no	yes
Yu et al, 2012	10.1088/0967-3334/33/12/2033	yes	yes	no	no applies partially	yes	partially applies partially applies partially	yes	no	yes
Sandroff et al, 2012	10.1682/JRRD.2011.03.0063	yes	yes	yes	yes partially	yes	partially applies partially applies partially	yes	no	yes
Weikert et al, 2012	10.1016/J.MEDENGPY.2011.09.005	yes	yes	yes	yes	yes	partially applies partially applies partially	yes	no	yes
Motl et al, 2012	10.1016/J.GAITPOST.2011.09.005	yes	yes	yes	yes	yes	partially applies partially applies partially	yes	no	yes
Spain et al, 2012	10.1016/J.GAITPOST.2011.11.026	yes	yes	yes	yes	yes	no applies partially applies partially	yes	no	no
Coote et al, 2012	10.1016/J.APMR.2012.05.010	yes	yes	yes	yes	yes partially applies partially	partially applies partially applies partially	yes	no	yes
Sosnoff et al, 2012	10.1682/JRRD.2011.11.0218	yes	no	yes	yes	yes partially applies partially	partially applies partially applies partially	yes	no	yes
Sosnoff et al, 2012	10.1155/2012/315620	yes	yes	yes	yes	yes partially applies partially	partially applies partially applies partially	yes	no	yes
Sandroff et al, 2012	10.1111/J.1600-0404.2011.01634.X	yes	yes	yes	yes applies partially	yes partially applies partially	yes applies partially applies partially	yes	no	yes
Motl et al, 2012	10.1037/A0025965	yes	yes	yes	yes partially	yes partially applies partially	applies partially applies partially	yes	no	yes
Ranadive et al, 2012	10.1249/MSS.0B013E31822D7997	yes	yes	yes	yes	yes partially applies partially	partially applies partially applies partially	yes	no	yes
Pilutti et al, 2012	10.1155/2012/868256	yes	yes	yes	yes	yes partially applies partially	partially applies partially applies partially	no	no	yes
Motl et al, 2013	10.1111/ANE.12036	yes	yes	yes	yes	yes partially	partially applies partially	yes	no	yes

Huisinga et al, 2013	10.1007/S10439-012-0697-Y	yes	yes	yes	applies partially	yes applies partially	applies partially	yes	no	yes
Motl et al, 2013	10.1371/JOURNAL.PONE.0073247	yes	yes	yes	yes	yes applies partially	yes applies partially	yes	no	yes
Sandroff et al, 2013	10.3109/09638288.2012.707745	yes	yes	yes	yes applies partially	yes applies partially	yes applies partially	yes	no	yes
Grčić et al, 2013	10.1007/S13760-013-0187-5	yes	yes	yes	yes applies partially	yes applies partially	yes applies partially	yes	no	yes
Hilfiker et al, 2013	10.1186/1756-0500-6-260	yes	yes	yes	yes applies partially	yes applies partially	yes applies partially	yes	no	yes
Motl et al, 2013	10.2522/PTJ.20120479	yes	yes	yes	yes	yes applies partially	yes applies partially	yes	no	yes
Lamers et al, 2013	10.1177/1352458513475832	yes applies partially	yes	yes	yes	yes applies partially	yes applies partially	yes	no	yes
Sandroff et al, 2013	10.1016/J.MHPA.2013.08.001	yes applies partially	yes	yes	yes	yes	yes applies partially	yes	no	yes
Dlugonski et al, 2013	10.1016/J.APMR.2012.12.014	yes	yes	yes	yes applies partially	yes	yes applies partially	yes	no	yes
Morrison et al, 2013	10.1016/J.JNS.2012.10.007	yes	yes	yes	yes applies partially	yes applies partially	yes applies partially	yes	no	yes
Learmonth et al, 2013	10.1177/1352458513483890	yes	yes	yes	yes	yes applies partially	yes applies partially	yes	no	yes
Learmonth et al, 2013	10.1186/1471-2377-13-37	yes	yes	yes	yes	yes applies partially	yes applies partially	yes	no	yes
Sandroff et al, 2014	10.1016/J.JNS.2014.02.024	yes	yes	yes	yes	yes applies partially	yes applies partially	yes	no	yes
Sandroff et al, 2014	10.1016/J.MSARD.2013.06.014	yes	yes	yes	yes	yes applies partially	yes applies partially	yes	no	yes
Sandroff et al, 2014	10.1371/JOURNAL.PONE.0093511	yes	yes	yes	yes	yes applies partially	yes applies partially	yes	no	yes
Spain et al, 2014	10.1016/J.GAITPOST.2013.12.010	no	yes	yes	yes	yes applies partially	yes applies partially	yes	no	yes
Shammas et al, 2014	10.1186/1475-925X-13-10	yes	yes	yes	yes	yes applies partially	yes applies partially	yes	no	yes
Schwartz et al, 2014	10.1016/J.JNS.2014.10.021	yes applies partially	yes	yes	yes	yes applies partially	yes applies partially	yes	no	no
Balantrapu et al, 2014	10.1155/2014/649390	yes applies partially	yes	yes	yes	yes applies partially	yes applies partially	yes	no	yes
Sandroff et al, 2014	10.1016/J.MSARD.2013.04.003	yes	yes	yes	yes	yes applies partially	yes applies partially	yes	no	yes
Huisinga et al, 2014	10.1016/J.APMR.2014.01.004	yes	yes	yes	yes	yes applies partially	no	yes applies partially	no	yes
Carpinella et al, 2014	10.1186/1743-0003-11-67	yes	yes	yes	yes applies partially	yes applies partially	yes applies partially	yes	no	yes
Ickmans et al, 2014	10.1016/J.CLINURO.2014.04.021	yes	yes	yes	yes applies partially	yes applies partially	yes applies partially	yes	no	yes
Motl et al, 2014	10.1080/08964289.2013.821966	yes	no	yes	yes	yes applies partially	yes applies partially	yes	no	yes
Suh et al, 2014	10.1007/S12529-013-9382-2	yes	yes	yes	yes	yes applies partially	yes	yes	no	yes
Motl et al, 2014	10.1159/000356116	yes	yes	yes	yes applies partially	yes applies partially	yes	yes	no	yes
Ayache et al, 2015	10.1016/J.NEUCLI.2015.09.013	yes	yes	yes	yes applies partially	yes applies partially	yes	yes	no	yes
Gong et al, 2015	10.1109/BSN.2015.7299400	yes	no	no	no	yes	yes	yes	no	no

Gong et al, 2015	10.4108/EAI.28-9-2015.2261504	yes	no	no	no	yes	yes	yes	no	applies partially
Solomon et al, 2015	10.1186/S12984-015-0066-9	yes	yes	yes	no applies partially	yes	yes	yes	no	no
Kahraman et al, 2015	10.1016/J.CLINEURO.2015.07.018	yes	yes	yes	yes	yes applies partially applies partially	yes	yes	no	yes
Motl et al, 2015	10.7224/1537-2073.2014-016	yes	yes	yes	yes	yes	yes applies partially applies partially	yes	no	yes
Stellmann et al, 2015	10.1371/JOURNAL.PONE.0123822	yes	no	yes	yes	yes	yes partially applies partially applies partially	yes	no	yes
Kasser et al, 2015	10.3109/09638288.2015.1019008	yes	yes	yes	yes	yes	yes applies partially applies partially	no	no	yes
Bove et al, 2015	10.1212/NXI.0000000000000162	yes	no	yes	yes	yes	yes partially applies partially applies partially	yes	no	yes
Sandroff et al, 2015	10.1016/J.GAITPOST.2014.10.011	yes	yes	yes	yes	yes	yes partially	yes	no	yes
Carpinella et al, 2015	10.1088/1741-2560/12/4/046011	yes	yes	yes	yes	yes	yes	yes	no	yes
Blikman et al, 2015	10.1016/J.APMR.2014.08.023	yes	yes	yes	yes	yes	yes	yes	no	yes
Ezeugwu et al, 2015	10.1016/J.PMEDR.2015.03.007	yes	yes	yes	yes	yes	yes applies partially applies partially	yes	no	yes
Klaren et al, 2015	10.1155/2015/482536	yes	yes	yes	yes	yes	yes partially	yes	no	yes
Rice et al, 2015	10.1016/J.APMR.2015.06.011	yes	yes	yes	yes	yes	yes	yes	no	yes
Sandroff et al, 2015	10.1097/NPT.0000000000000087	yes	yes	yes	yes	yes	yes	yes applies partially applies partially	no	yes
Hubbard et al, 2015	10.1139/APNM-2014-0271	yes	yes	yes	yes	yes	yes	yes	no	yes
Moon et al, 2015	10.1155/2015/964790	yes	yes	yes	yes	yes	yes	yes	no	yes
Ayache et al, 2015	10.1016/J.JNS.2015.09.360	yes	yes	yes	yes	yes	yes	yes applies partially	no	yes
Fjeldstad et al, 2015	10.7224/1537-2073.2014-037	yes	yes	yes	yes	yes	yes applies partially applies partially	yes	no	yes
Sola-Valls et al, 2015	10.1007/S00415-015-7764-X	yes	yes	yes	yes	yes	yes applies partially applies partially	yes	no	yes
Brown et al, 2016	10.7224/1537-2073.2015-035	yes	yes	yes	yes	yes	yes applies partially applies partially	yes	no	yes
Balto et al, 2016	10.1177/2055217316634754	yes	yes	yes	yes	yes	yes	yes	no	yes
Gong et al, 2016	10.1109/JBHI.2016.2589902	yes	no	yes	yes	yes	yes	yes	no	yes
Pau et al, 2016	10.1016/J.MSARD.2016.10.007	yes	yes	yes	yes	yes	yes	yes	no	yes
Dandu et al, 2016	10.1109/BSN.2016.7516271	yes	no	yes	yes	yes	yes	yes	no	no
Stellmann et al, 2016	10.1016/J.JNS.2016.07.051	yes	yes	yes	yes	yes	yes	yes	no	yes
Brodie et al, 2016	10.1080/10255842.2016.1140747	yes	no	yes	yes	yes	yes	yes	no	yes
Klaren et al, 2016	10.14336/AD.2015.1025	yes	yes	yes	yes	yes	yes	yes	no	yes
Grover et al, 2016	10.1016/J.JPEDS.2016.08.104	yes	yes	yes	yes	yes	yes	yes	no	yes
Kinnett-Hopkins et al, 2016	10.1016/J.MSARD.2016.08.010	yes	yes	yes	yes	yes	yes	yes	no	yes

Zörner et al, 2016	10.1177/1352458515622695	yes	yes applies partially	yes	yes	yes	yes	yes	no	no
Engelhard et al, 2016	10.1016/J.GAITPOST.2016.07.184	yes	yes partially	yes	yes	yes	yes	yes	no	no
Klaren et al, 2016	10.1123/APAQ.2015-0007	yes	no	yes	yes	yes applies partially	yes	yes	no	yes
Lorefice et al, 2017	10.1007/S00415-017-8612-Y	yes	yes	yes	yes applies partially	yes	yes	yes	no	no
McGinnis et al, 2017	10.1371/JOURNAL.PONE.0178366	yes	yes	yes	yes partially	yes	yes	yes	no	yes
Pau et al, 2017	10.1016/J.MSARD.2017.04.002	yes	yes	yes	yes	no	yes	yes applies partially	no	yes
Qureshi et al, 2017	10.1109/BSN.2017.7936025	no	no	no	no	no	yes	yes partially	no	no
Craig et al, 2017	10.1186/S12984-017-0251-0	yes	yes	yes	yes	yes	yes	yes	no	yes
Sebastião et al, 2017	10.1097/PHM.0000000000000581	yes	yes	yes	yes applies partially	yes applies partially	yes	yes	no	yes
Norris et al, 2017	10.1016/J.GAITPOST.2017.02.005	yes	yes	yes	yes partially	yes applies partially	yes	yes applies partially	no	yes
Sebastião et al, 2017	10.3233/NRE-161401	yes	yes	yes	yes applies partially	yes applies partially	yes	yes applies partially	no	yes
Teufl et al, 2017	10.1177/0308022617726259	yes	yes	yes	yes partially	yes applies partially	yes applies partially	yes applies partially	no	yes
Klaren et al, 2017	10.2217/NMT-2016-0036	yes	yes	yes	yes	yes partially	yes partially	yes applies partially	no	yes
Klaren et al, 2017	10.1123/JPAH.2016-0335	yes	yes	yes	yes applies partially	yes applies partially	yes	yes applies partially	no	yes
Motl et al, 2017	10.1016/J.JNS.2016.11.070	yes	yes applies partially	yes	yes partially	yes partially applies	yes	yes partially	no	yes
Dalla-Costa et al, 2017	10.1016/J.JNS.2017.10.043	yes	yes partially	yes	yes partially applies	yes partially	yes applies partially	yes	no	yes applies partially
Pau et al, 2017	10.1016/J.GAITPOST.2017.08.023	yes	yes	yes	yes partially	yes applies partially	yes partially applies	yes applies partially	no	yes partially applies partially
Krüger et al, 2017	10.1186/S12883-016-0783-0	yes	yes	yes applies partially	yes	yes partially	yes partially	yes partially applies	no	yes partially applies partially
Aburub et al, 2017	10.1016/J.MSARD.2016.12.010	yes	yes	yes partially applies	yes	yes	yes applies partially	yes partially applies	no	yes
Craig et al, 2017	10.1016/J.CLINBIOMECH.2017.07.011	yes	yes	yes partially	yes applies partially	yes	yes partially	yes partially	no	yes
Coulter et al, 2017	10.1016/J.MEDENGPY.2017.03.008	yes	yes	yes	yes partially	yes	yes	yes	no	yes
El-Gohary et al, 2017	10.1016/J.APMR.2017.01.030	yes	yes	yes	yes	yes	yes	yes	no	yes
Sun et al, 2018	10.1159/000485958	yes	yes	yes	yes	yes applies partially	yes	yes	no	yes
Findling et al, 2018	10.3389/FNEUR.2018.00686	yes	yes	yes applies partially	yes	yes partially	yes	yes	yes	yes
Huisinga et al, 2018	10.1016/J.HUMOV.2017.12.009	yes	yes	yes partially	yes	yes applies partially	yes	yes	no	no
Fakolade et al, 2018	10.3138/PTC.2017-36.EP	yes	yes	yes	no	yes partially applies partially	yes	yes	no	yes
Neven et al, 2018	10.1177/0361198118772952	yes applies partially	no	yes	no	yes partially	yes	yes	no	no
Storm et al, 2018	10.1371/JOURNAL.PONE.0196463	yes partially	yes applies partially	yes	yes	yes	yes	yes	yes	no
DasMahapatra et al, 2018	10.1159/000488040	no	yes partially	yes	yes	yes	yes	yes	no	yes
Ketelhut et al, 2018	10.1080/09638288.2017.1336647	yes	yes	yes	no	yes	yes	yes	no	yes

Boukhvalova et al, 2018	10.3389/FNEUR.2018.00740	yes	yes	yes	yes	yes	yes	yes	no	no
Carpinella et al, 2018	10.1109/TNSRE.2018.2881324	yes	yes	yes	no	yes	yes	yes	no	yes
Sirhan et al, 2018	10.1007/S00702-018-1939-4	yes	yes	yes	yes	applies partially	yes	yes	no	yes
Cederberg et al, 2018	10.1123/JAPA.2016-0358	yes	yes	yes	yes	applies partially	yes	yes	no	yes
Engelhard et al, 2018	10.1016/J.GAITPOST.2017.10.015	yes	yes	yes	yes	applies partially	yes	yes	no	yes
Supratak et al, 2018	10.3389/FNEUR.2018.00561	yes	yes	yes	yes	partially	yes	yes	no	yes
Pau et al, 2018	10.1016/J.MSARD.2017.11.021	yes	yes	yes	yes	yes	yes	yes	no	yes
Witchel et al, 2018	10.3389/FNEUR.2018.00684	yes	yes	yes	yes	yes	yes	yes	no	yes
Dandu et al, 2018	10.1109/JBHI.2017.2773629	yes	applies partially	applies partially	applies partially	applies partially	yes	yes	no	yes
Motl et al, 2018	10.1037/REP0000162	yes	yes	yes	yes	applies partially	yes	yes	no	yes
Psarakis et al, 2018	10.1088/1361-6579/AAC0A3	yes	yes	yes	yes	yes	yes	yes	no	yes
Bernhard et al, 2018	10.1186/S12883-018-1111-7	yes	yes	no	no	yes	yes	yes	no	yes
Midaglia et al, 2019	10.2196/14863	yes	yes	yes	yes	no	yes	yes	no	yes
Block et al, 2019	10.1001/JAMANETWORKOPEN.2019.0570	yes	yes	yes	yes	no applies	yes	yes	no	yes
Kratz et al, 2019	10.1093/ABM/KAY018	yes	yes	yes	yes	partially	yes	yes	no	yes
Shema-Shiratzky et al, 2019	10.1007/S00415-019-09500-Z	yes	yes	yes	yes	yes applies	yes	yes	no	yes
Silveira et al, 2019	10.1016/J.CONCTC.2019.100366	yes	yes	yes	yes	partially	yes	yes	no	yes
Ehling et al, 2019	10.1371/JOURNAL.PONE.0220613	yes	yes	yes	yes	yes	yes	yes	no	yes
Anastasi et al, 2019	10.1002/PMRJ.12137	yes	yes	yes	no	yes	yes	yes	no	yes
Angelini et al, 2019	10.3390/S20010079	yes	yes	yes	yes	yes	yes	yes	yes	yes
Baird et al, 2019	10.1016/J.MSARD.2019.07.003	yes	yes	yes	yes	yes	yes	yes	no	yes
Rooney et al, 2021	10.1080/09638288.2019.1634768	yes	yes	yes	yes	yes	yes	yes	no	yes
Cederberg et al, 2019	10.1016/J.JNS.2019.116531	yes	yes	yes	yes	yes	yes	yes	no	yes
Bollaert et al, 2019	10.1519/JPT.0000000000000163	yes	yes	yes	yes	yes	yes	yes	no	no
Chitnis et al, 2019	10.1038/S41746-019-0197-7	yes	yes	yes	yes	yes	yes	yes	no	yes
Bollaert et al, 2019	10.7224/1537-2073.2018-001	yes	yes	yes	yes	applies partially	yes	yes	no	yes
Boukhvalova et al, 2019	10.3389/FNEUR.2019.00358	yes	yes	yes	yes	applies partially	yes	yes	applies partially	no
Motl et al, 2019	10.1016/J.DHJO.2019.05.002	yes	yes	yes	no	partially	yes	yes	no	yes
Grinberg et al, 2019	10.1016/J.GAITPOST.2019.02.022	yes	yes	yes	yes	yes	yes	yes	no	yes
Braakhuis et al, 2019	10.1186/S12984-019-0573-1	yes	yes	yes	yes	yes	yes	yes	no	yes
Block et al, 2019	10.1177/2055217319888660	yes	yes	yes	yes	yes	yes	yes	no	yes
Motl et al, 2019	10.1037/REP0000280	yes	yes	yes	no	no applies	yes	yes	no	yes
Sasaki et al, 2019	10.1080/02640414.2018.1554614	yes	yes	applies partially	no	partially	yes	yes	no	yes

Schwab et al, 2020	10.1109/JBHI.2020.3021143	yes	applies partially	applies partially	no	no	applies partially	applies partially	yes	yes
Shema-Shiratzky et al, 2020	10.1007/S00415-020-09759-7	yes	yes	yes	yes	no	yes	yes	no	yes
Mosquera-Lopez et al, 2020	10.1109/JBHI.2020.3041035	yes	yes	yes	yes	yes	yes	applies partially	applies partially	applies partially
Daunoraviciene et al, 2020	10.1109/MSM49833.2020.9201642	yes	yes	yes	yes	yes	yes	applies partially	yes	no
Mate et al, 2020	10.7224/1537-2073.2019-047	yes	yes	yes	yes	yes	yes	applies partially	applies partially	no
Næss-Schmidt et al, 2020	10.1080/2331205X.2020.1713280	applies partially	yes	yes	no	yes	yes	applies partially	applies partially	no
Sandroff et al, 2020	10.1017/S1355617720000284	yes	yes	yes	yes	yes	yes	applies partially	applies partially	no
Cohen et al, 2021	10.1007/S00415-020-10276-W	yes	applies partially	yes	yes	yes	yes	applies partially	applies partially	no
Pau et al, 2020	10.3390/IJERPH17238848	yes	yes	yes	yes	yes	yes	partially	no	yes
Twose et al, 2020	10.1063/5.0022031	yes	yes	no	no	yes	yes	yes	no	yes
Pratap et al, 2020	10.2196/22108	applies partially	yes	yes	yes	applies partially	applies partially	yes	yes	yes
Nasseri et al, 2020	10.7717/PEERJ.9303	yes	yes	yes	yes	no	yes	applies partially	no	yes
Bourke et al, 2020	10.3390/S20205906	yes	yes	yes	yes	yes	yes	yes	no	yes
Lizama et al, 2020	10.1016/J.GAITPOST.2020.02.006	yes	yes	yes	yes	yes	yes	yes	no	yes
Ibrahim et al, 2020	10.1186/S12984-020-00798-9	yes	yes	yes	yes	yes	yes	applies partially	no	yes
Neal et al, 2020	10.1177/1545968320916159	yes	yes	yes	yes	yes	yes	applies partially	no	yes
Shah et al, 2020	10.1186/S12984-020-00781-4	yes	yes	yes	yes	yes	yes	applies partially	no	yes
Tulipani et al, 2020	10.1016/J.GAITPOST.2020.06.014	yes	yes	applies partially	applies partially	yes	applies partially	applies partially	yes	applies partially
Maillart et al, 2020	10.1111/ENE.14091	yes	yes	yes	yes	applies partially	applies partially	yes	no	yes
Akhbardeh et al, 2020	10.1002/ACN3.50988	yes	yes	yes	yes	applies partially	applies partially	yes	no	yes
Flachenecker et al, 2019	10.1016/J.MSARD.2019.101903	yes	yes	yes	yes	yes	yes	applies partially	no	yes
Vienne-Jumeau et al, 2020	10.3389/FNEUR.2020.00261	yes	yes	yes	yes	yes	yes	yes	no	yes
Hibner et al, 2020	10.1016/J.MSARD.2020.101941	yes	yes	yes	yes	applies partially	yes	applies partially	no	yes
Stuart et al, 2020	10.1177/2055217320975185	yes	yes	yes	yes	yes	yes	applies partially	no	yes
Daunoraviciene et al, 2020	10.3233/THC-208003	yes	yes	yes	yes	applies partially	yes	applies partially	no	no
Shah et al, 2020	10.1007/S00415-020-09696-5	yes	yes	yes	yes	applies partially	yes	applies partially	no	yes
Sato et al, 2020	10.1016/J.MSARD.2020.102031	yes	yes	yes	yes	yes	yes	yes	no	yes
Lam et al, 2021	10.1177/1352458520968797	yes	yes	yes	yes	yes	yes	yes	no	yes
Brull et al, 2020	10.3390/S20154329	yes	applies partially	no	yes	applies partially	yes	yes	no	yes

Ader et al, 2020	10.3390/BIOS10090128	yes	yes	yes	yes	yes	yes	yes applies partially	no	yes
Zhai et al, 2020	10.3389/FNEUR.2020.00688	yes	yes	yes	yes	yes applies partially	yes	yes	no	yes
Creagh et al, 2020	10.1088/1361-6579/AB8771	yes	yes	yes	yes	yes applies partially	yes	yes applies partially	no	yes
Huang et al, 2020	10.3390/S20216160	yes	yes	yes	yes	yes applies partially	yes	yes applies partially	no	yes
Shalmoni et al, 2020	10.1007/S00702-020-02190-2	yes	yes	yes	yes	yes applies partially	yes	yes applies partially	no	yes
Karle et al, 2020	10.3390/IJERPH17239044	yes	yes	yes	yes applies partially	yes	yes	yes applies partially	no	yes
Craig et al, 2020	10.1016/J.CLINBIOMECH.2020.105100	yes	yes	yes	yes	yes	yes	yes applies partially	no	yes
Pilloni et al, 2020	10.1002/ACN3.51224	yes	yes applies partially	yes	yes	yes	yes	yes	no	yes
Angelini et al, 2020	10.1007/S00415-020-09928-8	yes	yes	yes	yes applies partially	yes	yes applies partially	yes applies partially	no	yes applies partially
Meyer et al, 2020	10.1109/JBHI.2020.3025049	yes	yes applies partially	yes	yes	yes	yes applies partially	yes applies partially	no	yes applies partially
Angelini et al, 2021	10.1109/TBME.2021.3061998	yes	yes	yes	yes	yes applies partially	yes applies partially	yes applies partially	no	yes
Abbadessa et al, 2021	10.3390/JCM10061160	yes	yes	yes	yes	yes applies partially	yes applies partially	yes applies partially	no	yes
Krysko et al, 2021	10.1002/ACN3.51187	yes	yes	yes applies partially	yes applies partially	yes	yes applies partially	yes applies partially	no	yes
Shah et al, 2021	10.1016/J.GAITPOST.2020.11.024	yes	yes	yes	yes	yes	yes applies partially	yes applies partially	no	yes
Abonie et al, 2020	10.3390/IJERPH18010017	yes	yes	yes	yes applies partially	yes	yes	yes applies partially	no	yes
Teufl et al, 2021	10.1177/2055668320966955	yes	yes	yes	yes	yes	yes applies partially	yes	no	yes
Hsieh et al, 2020	10.1016/J.GAITPOST.2020.11.011	yes	yes applies partially	yes	yes applies partially	yes	yes	yes	no	yes
Creagh et al, 2020	10.1109/JBHI.2020.2998187	yes	yes	yes	yes	yes	yes applies partially	yes	yes	yes
Jeng et al, 2021	10.1080/09638288.2019.1614683	yes	yes	yes	yes	yes	yes	yes	no	yes
Cheng et al, 2021	10.1016/J.GAITPOST.2020.11.025	yes	yes	yes	yes	yes	yes applies partially	yes applies partially	no	yes
Pau et al, 2021	10.1097/MD.0000000000024931	yes	yes	yes	yes	yes	yes	yes	no	yes

#### Quality assessment questions

1. Does the study have a clearly defined research objective (including an outcome)?
2. Does the study adequately describe the inclusion/exclusion criteria?
3. Does the study report on the population parameters/demographics (at least age, sex)?
4. Does the study report details on assessment of MS (severity [EDSS or PDSS], type)?
5. Does the study provide sufficient details on the wearables used (type, positioning of wearable, context, recording frequency)?
6. Does the study apply proper statistical analysis? Correction for multiple comparisons?
7. Does the study adequately report the strength of the results (e.g., ways of calculating effect sizes, reporting confidence intervals/standard deviation)?
8. Does the study make the data and/or code publicly available?
9. Do the authors report on the limitations of their study?

Y= yes, N=No, Y/N= applies partially



