Appendices

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Appendic 1: Sociodemographic characteristic of the review participants

Author ID	Sample size	Study design	Sampling tech	Setting	Country	Age (Mean)	Age (Sd)	Female	Education (post-secondary)	Marital status	Income (%above line
Baehr et al., 2022	27	Cross sectional	Non prob	Community	USA	48.8	12.5	-	96.2	-	100
Hansen et al., 2021	181	Cross sectional	Non-probability	Community	Denmark	47.5	13.5	52.5	47.5	-	-
Postma et al., 2024	47	Longitudinal cohort study	Non-probability	Rehab centre	Netherlands	54.5	12.9	46.8	-	-	-
Sweet et al., 2021	43	Double baseline longitudinal	Non-probability	Community	Canada	51.88	16.49	65	69	33	-
Kooijmans et al., 2019	268	Cross sectional	Non-probability	Hospitals	Netherlands	47.7	8.8	27	51.4	60.9	-
Handlery et al., 2024	14	Non-randomised clinical trial	Non-prob	Community fitness centre	USA	59.5	15.3	14	-	57	70
Jorgensen, Ginis, Lexell 2017	123	Cross-sectional	Non-prob	Home setting	Southern Sweden	63.5	8.7	29	-	54	
Montesinos - Magraner et al., 2018	67	Cross-sectional	Non-prob	Hospital and Sport Centre	Spain	60.63	14.12	29	-	-	-
Nooijen et al., 2015	37	Cross sectional	Random	Rehabilitation centres	Netherlands	44		14	-	-	-
Rauch et al., 2016	485	Longitudinal cohort	Non-prob	Community	Switzerland	52.9	14.8	26.4	64.7	67.4	100
Rauch et al., 2017	485	Cohort	Random	Community	Switzerland	52.8	14.8	26.4	-	-	-
Soriano et al., 2022	330	Cohort	Non-prob	Community	Canada	57	-	0.22	0.36		0.25
van Koppenhagen et al., 2014	130	Cross sectional	Random	Community	Netherlands	13.7	-	0.254	-	-	-
Urbanski, Conners, Tasiemski, 2021	51	Longitudinal study	Non-prob	Community	Poland	30	7.9	31.4	-	31.4	-
Mat Rosly et al., 2018	70	cross-sectional	non-prob	community	Malaysia	39	12.6	30	37	-	30
Hoevanaars et al., 2022	358	cross-sectional	non-prob	Rehab centres	UK	47.4	10.8	26.8	43.9	-	

Appendix 2: Risk of bias assessment

	Domains					
Study	Is the sampling strategy relevant to address the research question?	Is the sample representative of the target population?	Are the measurements appropriate?	Is the risk of nonrespons e bias low?	Is the statistical analysis appropriate to answer the research question?	Score
Baehr et al., 2022	No	No	Yes	Yes	Yes	Moderate Risk
Hansen et al., 2021	No	Yes	Yes	Yes	Yes	Low risk
Postma et al., 2024	Yes	No	Yes	Yes	Yes	Low risk
Postma et al., 2020	Yes	No	Yes	Yes	Yes	Low risk
Sweet et al., 2021	Yes	No	Yes	Yes	Yes	Low risk
Kooijmans et al., 2019	No	Yes	Yes	Yes	Yes	Low risk
Handlery et al., 2024	No	No	Yes	Yes	Can't tell	Moderate Risk
Jorgensen, Ginis, Lexell 2017	No	Yes	Yes	Yes	Yes	Low risk
Montesinos - Magraner et al., 2018	No	Yes	Yes	Yes	Yes	Low risk
Nooijen et al., 2015	No	Yes	Yes	Yes	Yes	Low risk
Rauch et al., 2016	Yes	Yes	Yes	Yes	Yes	Low risk
Rauch et al., 2017	No	Yes	Yes	Can't tell	Yes	Low risk
Soriano et al., 2022	No	Yes	Yes	Yes	Yes	Low risk
van Koppenhagen et al., 2014	Yes	Yes	Yes	No	Yes	Low risk
Urbanski, Conners, Tasiemski, 2021	Yes	Yes	Yes	No	Yes	Low risk
Mat Rosly et al., 2018	No	Yes	Yes	Yes	Yes	4: Low risk
Hoevanaars et al., 2022	No	Yes	Yes	Yes	Yes	4: Low risk

Appendix 3: Certainty of evidence underscoring the review findings

Domains / Factors	Limitation	Indirectness	Imprecision	Inconsistency	Publication bias	Certainty of evidence
Age	Not serious	Not serious	Serious	Serious	Unlikely	⊕⊕◯◯
Sex	Not serious	Not serious	Serious	Serious	Unlikely	⊕⊕◯◯
Education	Not serious	Not serious	Serious	Not serious	Unlikely	⊕⊕⊕◯
Relationship status	Not serious	Not serious	Serious	Not Serious	Unlikely	⊕⊕⊕◯
Income	Not serious	Not serious	Serious	Not serious	Unlikely	⊕⊕⊕◯
Time since injury	Not serious	Not serious	Serious	Not serious	Unlikely	⊕⊕⊕◯
Lesion level	Not serious	Not serious	Serious	Not serious	Unlikely	⊕⊕⊕◯
Vertebral level of injury	Not serious	Not serious	Serious	Not serious	Unlikely	⊕⊕⊕◯
Lesion completeness	Not serious	Not serious	Serious	Serious	Unlikely	⊕⊕◯◯
Mechanism of injury	Not serious	Not serious	Serious	Not serious	Unlikely	⊕⊕⊕◯
Employment	Not serious	Not serious	Serious	Serious	Unlikely	⊕⊕◯◯
Severity/ASIA /AIS classification	Not serious	Serious	Serious	Not serious	Unlikely	⊕⊕◯◯
Mobility aid/type of locomotion	Not serious	Not serious	Serious	Not serious	Unlikely	⊕⊕⊕◯

Appendix 4**:** Association between Sociodemographic and Injury factors and PA level

Risk Factor	Study design	Intervention	Effect size OR)	Lower limit	Upper limit	P-value
Age						
Baehr et al., 2023	Cross sectional	Current Age	1.66	0.51	5.39	-
Hoevenaars et al., 2022	Cross sectional	Age	0.054	-	-	0.002
Sweet et al., 2021	Cohort	-	0.85	-	-	>0.05
Jorgensen, Ginis, Lexell, 2017	Cross-sectional	-	1.17	-	-	0.12
Mat Rosyl et al., 2018	Cross-sectional	-	3.x36	1.10	10.28	0.03
Montesinos-Magraner et al., 2018	Cross-sectional	-	2.76	1.14	6.66	-
Postma et al., 2024	Longitudinal cohort study	-	0.55	0.27	0.90	0.08
Postma et al., 2020		Age at d/c	0.30	0.12	0.74	0.06
Rauch et al., 2016	Longitudinal cohort	>=31 VS 17-30	4.64	0.99	21.76	0.052
Rauch et al., 2017	Cohort	>=31 VS 17-30	0.195	0.04	1.11	0.0405
Urbanski, Conners, Tasiemski, 2021	Longitudinal study	-	2.47	-	-	<0.001
Van Koppenhagen et al., 2014	Cross sectional	-	0.49	0.30	0.80	-
Nooijen et al., 2015	Cross sectional	Age <50 VS>59	1.0617	-	-	0.92
Sex						
Jorgensen, ginis, lexell, 2017	Cross-sectional	Female gender	1.23	-	-	0.02
Urbanski, Conners, Tasiemski, 2021	Longitudinal study	-	0.49	-	-	<= 0.001
Hoevenaars et al., 2022	Cross sectional	-	1.30	-	-	<0.001
Hansen et al., 2021	Cross sectional	-	2.69	-	-	
Handlery et al., 2024	Non-randomised clinical trial	-	0.33	-	-	0.16

Mat Rosyl et al., 2018	Cross-sectional	-	0.90	0.29	2.82	0.86
Sweet et al.,2021	Cohort	-	1.03			>0.05
Montesinos-Magraner et al., 2018	Cross-sectional	-	0.39	0.12	1.23	-
Rauch et al., 2016	Longitudinal cohort	Female Gender	1.12	0.63	2.02	0.696
Rauch et al., 2017	Cohort		0.66	0.39	0.93	0.09
Kooijmans et al., 2019	Cross sectional		0.93	0.40	0.08	0.01
Van Koppenhagen et al., 2014	Cross sectional		0.99	0.54	1.83	
Education						
Hansen et al., 2021	Cross sectional	Graduate vs non-graduate	0.9506	-0.49	1.84	0.20
Mat Rosyl et al., 2018	Cross-sectional		0.56	0.19	1.62	0.28
Rauch et al., 2016	Longitudinal cohort	<13 vs >13	0.69	0.41	1.16	0.161
Baehr et al., 2023	Cross sectional		0.64	0.14		
Sweet et al.,2021	Cohort		1.22			>0.05
Hoevenaars et al., 2022	Cross sectional	Lower educational level vs. Middle educational level	0.54			0.26
Hoevenaars et al., 2022	Cross sectional	Higher educational level vs. Middle educational level	0.27			0.50
Rauch et al., 2016	Longitudinal cohort		0.56	0.161	1.16	
Soriano et al., 2022	Cohort		0.69			
Relationship status						
Mat Rosyl et al., 2018	Cross-sectional	In relationship vs Not in relationship	0.74	0.26	2.13	0.57
Rauch et al., 2016	Longitudinal cohort	No partner vs with partner	0.90	0.72	1.13	0.789

Urbanski, Conners, Tasiemski, 2021	Longitudinal study	Mild LTPA	2.61			0.136
Income						
Mat Rosyl et al., 2018	Cross-sectional	≤RM2499 vs ≥RM2500	0.9	0.29	2.82	0.86
Rauch et al., 2016	Longitudinal cohort	2501-3750CHF	0.780	0.36	1.703	0.567
Baehr et al., 2023	Cross sectional	-	0.53	0.11	2.34	
Time since Injury						
Mat Rosyl et al., 2018	Cross-sectional	<=5 vs >= 6 years	0.94	0.33	2.69	0.90
Jorgensen, Ginis, Lexell, 2017	Cross-sectional	-	1.08			0.47
Rauch et al., 2016	Longitudinal cohort	>=6-15 years vs 0-5y	0.68	0.96	4.12	0.3736
Rauch et al., 2017	Cohort	>=6 years vs 0-5y	1.523	0.75	3.093	0.359
Urbanski, Conners, Tasiemski, 2021	Longitudinal study	-	-	-	-	0.03
Postma et al., 2020	Longitudinal cohort study	In years	0.94	0.33	2.69	0.90
Postma et al., 2024	Longitudinal cohort study	Time in days	0.90	0.67	1.22	0.49
Montesinos-Magraner et al., 2018	Cross-sectional	-	0.95	1.11	-	0.81
Kooijmans et al., 2019	Cross-sectional	-	0.85	-0.03	-0.01	<0.001
Baehr et al., 2023	Cross sectional	-	0.97	1.69	19.829	-
Hoevenaars et al., 2022	Cross sectional	TSI vs non-traumatic	0.01	-	-	0.69
Lesion level						
Jorgensen, Ginis, Lexell, 2017	Cross-sectional	Tetraplegia ais a–cb	0.95	-	-	0.67
Jorgensen, Ginis, Lexell, 2017	Cross-sectional	Paraplegia ais a–cb	0.86	-	-	0.22

Mat Rosyl et al.,2018	Cross-sectional	Paraplegia vs tetraplegia	0.83	0.28	2.47	0.74
Rauch et al., 2016	Longitudinal cohort	-	0.785	-	-	0.54
Rauch et al., 2017	Cohort	-	0.735	-	-	0.86
Urbanski, Conners, Tasiemski, 2021	Longitudinal study	Paraplegia vs tetraplegia	2.51	-	-	<0.001
Nooijen et al., 2015	Cross sectional	Paraplegia vs Tetraplegia	3.37	-	-	0.05
Van Koppenhagen et al., 2014	Cross sectional	Paraplegia vs Tetraplegia	5.74	3.12	10.57	
Hoevenaars et al., 2022	Cross sectional	-	1.03	-	-	<0.001
Vertebral level of injury						
Kooijmans et al., 2019	Cross-sectional	-	0.93	0.68	1.11	0.25
Montesinos-Magraner et al., 2018	Cross-sectional	-	0.67	0.25	1.76	-
Baehr et al., 2023	Cross sectional	-	0.70	0.15	3.04	-
Lesion completeness						
Rauch et al., 2016	Longitudinal cohort	Complete para vs Incomplete paraplegia	2.07	0.88	4.86	0.095
Rauch et al., 2016	Longitudinal cohort	Incomplete tetra vs incomplete paraplegia	1.75	0.87	3.53	0.120
Rauch et al., 2016	Longitudinal cohort	Complete tetra	3.29	1.24	8.71	0.017
Rauch et al., 2017	Cohort	Complete para vs incomplete paraplegia	0.49	0.22	1.13	0.093
Rauch et al., 2017	Cohort	Incomplete tetra vs incomplete paraplegia	0.60	0.31	1.17	0.136
Rauch et al., 2017	Cohort	Complete tetraplegia	0.39	0.16	0.97	0.042
Nooijen et al., 2015	Cross sectional	Complete vs incomplete	1.73	-	-	0.36

Hoevenaars et al., 2022			1.55	-	-	<0.001
Kooijmans et al., 2019	Cross-sectional	Complete vs incomplete	0.86	0.50	0.90	0.01
Van Koppenhagen et al., 2014	Cross sectional	Complete vs incomplete	0.82	0.46	1.47	-
Baehr et al., 2023	Cross sectional		2.10	0.45	9.84	-
Mechanism of injury						
Mat Rosyl et al.,2018	Cross-sectional	Traumatic vs non-traumatic	1.65	0.56	4.86	0.36
Rauch et al., 2016	Longitudinal cohort	Traumatic vs non-traumatic	1.11	0.56	2.18	0.770
Hoevenaars et al., 2022	Cross sectional	Traumatic vs non-traumatic	1.90	-	-	0.72
Baehr et al., 2023	Cross sectional	Traumatic vs non-traumatic				
Van Koppenhagen et al., 2014	Cross sectional	-	7.5	0.73	76.77	-
Employment						
Jorgensen, Ginis, Lexell, 2017	Cross-sectional	Working full-time/part-time	0.79	-	-	0.03
Rauch et al., 2017	Cohort		1.12	-	-	0.65
Mat Rosyl et al., 2018	Cross-sectional	Paid employ vs others	2.22	0.76	6.49	0.14
Severity/ASIA/AIS classification						
Mat Rosyl et al., 2018	Cross-sectional	A vs B/C/D	0.70	-	-	0.51
Van Koppenhagen et al., 2014	Cross sectional	-	1.32	0.82	2.14	-
Mobility aid/type of locomotion						
Rauch et al., 2017	Cohort	Manual wheelchair vs pedestrian without device	4.29	1.74	10.93	0.002

Jorgensen, Ginis, Lexell, 2017	Cross-sectional	Powered wheelchair	0.62	-	-	0.00
Mat Rosyl et al., 2018	Cross-sectional	Wheelchair vs non-wheelchair	0.74	0.23	2.35	0.61
Rauch et al., 2016	Longitudinal cohort	Wheelchair, manual without support	0.24	0.09	0.61	0.003
Residence						
Jorgensen, Ginis, Lexell, 2017	Cross-sectional	Urban vs rural residence	0.87	-	-	0.11
Mat Rosyl et al., 2018	Cross-sectional	Urban vs rural residence	0.61	0.21	1.76	0.36
Mobility level						
Postma et al., 2024	Longitudinal cohort study	-	90.02	-	-	<0.001
Type of Housing						
Mat Rosyl et al., 2018	Cross-sectional	Good accessibility vs poor accessibility	0.47	0.15	1.48	0.19
Length of rehab						
Van Koppenhagen et al., 2014	Cross sectional	-	0.80	0.50	1.30	-