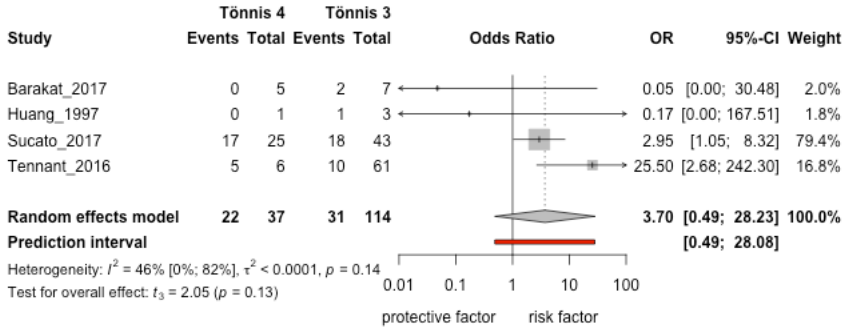
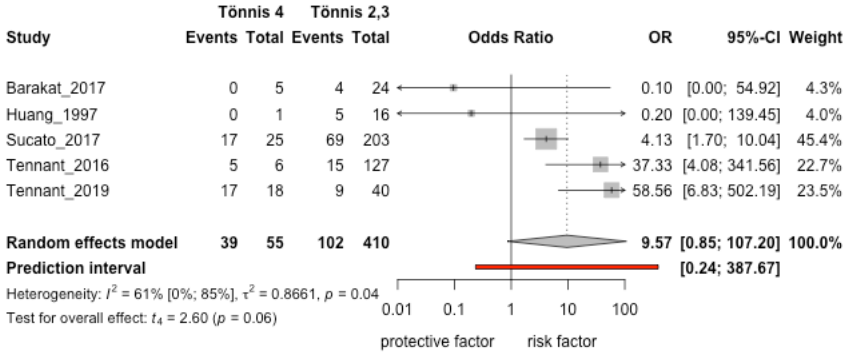
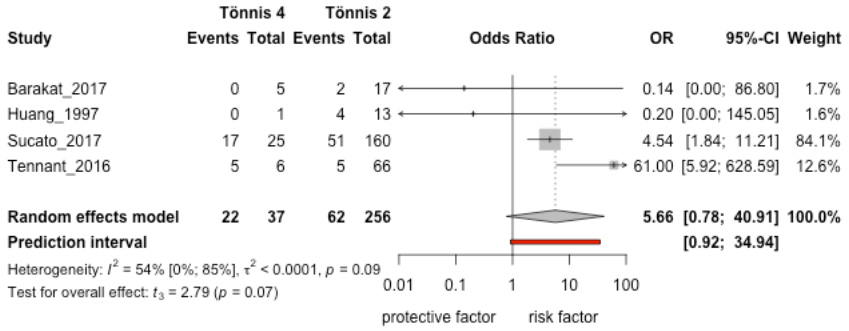
RISK FACTORS – OVERALL FAILURE (GROUP 0-36)

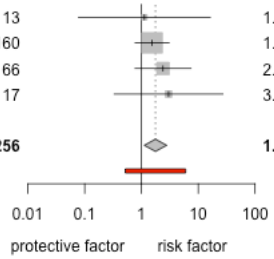






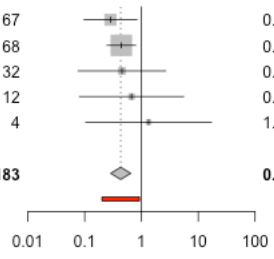
Study	Tönnis 3 Events	Tönnis 3 Total	Tönnis 2 Events	Tönnis 2 Total	OR	95%-CI	Weight
Huang_1997	1	3	4	13	1.12	[0.08; 16.31]	4.4%
Sucato_2017	18	43	51	160	1.54	[0.77; 3.07]	65.1%
Tennant_2016	10	61	5	66	2.39	[0.77; 7.45]	24.1%
Barakat_2017	2	7	2	17	3.00	[0.33; 27.23]	6.4%
Random effects model	**31**	**114**	**62**	**256**	**1.76**	**[1.12; 2.78]**	**100.0%**
Prediction interval						**[0.52; 6.00]**	

Heterogeneity: I^2 = 0% [0%; 85%], τ^2 = 0, p = 0.86
Test for overall effect: t_3 = 3.96 (p = 0.03)



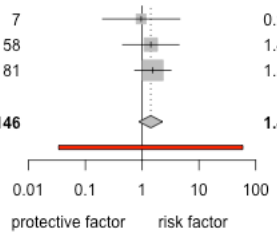
Study	Tönnis 2 Events	Tönnis 2 Total	Tönnis 3,4 Events	Tönnis 3,4 Total	OR	95%-CI	Weight
Tennant_2016	5	66	15	67	0.28	[0.10; 0.83]	19.0%
Sucato_2017	51	160	35	68	0.44	[0.25; 0.79]	65.6%
Elghobashy_2021	2	33	4	32	0.45	[0.08; 2.66]	7.0%
Barakat_2017	2	17	2	12	0.67	[0.08; 5.54]	4.9%
Huang_1997	4	13	1	4	1.33	[0.10; 17.10]	3.4%
Random effects model	**64**	**289**	**57**	**183**	**0.43**	**[0.29; 0.65]**	**100.0%**
Prediction interval						**[0.20; 0.92]**	

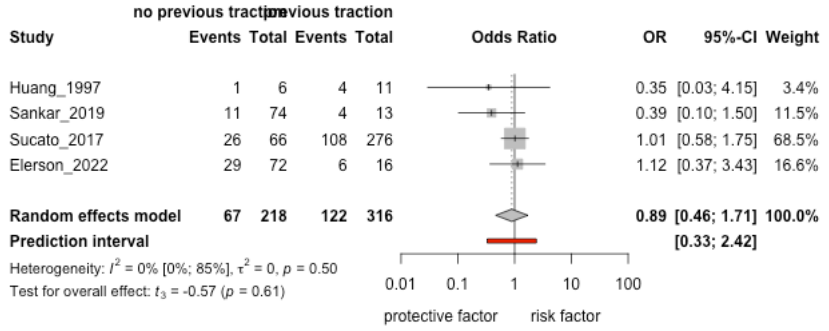
Heterogeneity: I^2 = 0% [0%; 79%], τ^2 = 0, p = 0.83
Test for overall effect: t_4 = -5.74 (p < 0.01)

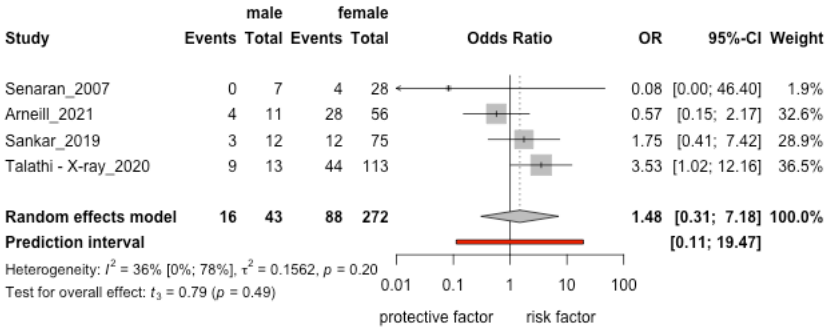


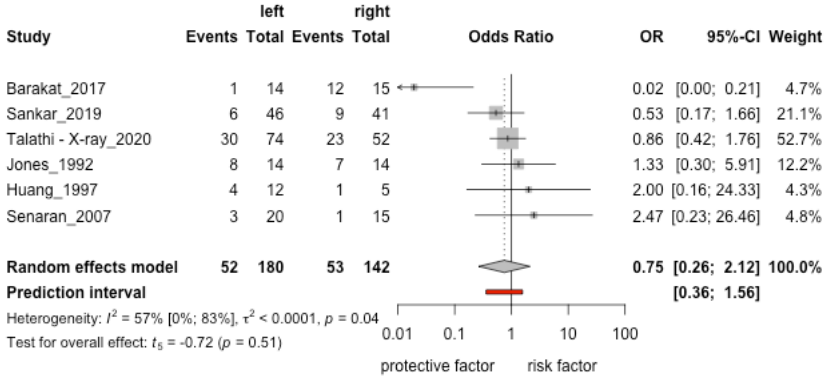
Study	previous brace treatment Events	previous brace treatment Total	no previous brace treatment Events	no previous brace treatment Total	OR	95%-CI	Weight
Talathi_2020	31	74	3	7	0.96	[0.20; 4.60]	13.5%
Sankar_2019	6	29	9	58	1.42	[0.45; 4.47]	25.3%
Talathi_2020	22	45	31	81	1.54	[0.74; 3.22]	61.2%
Random effects model	**59**	**148**	**43**	**146**	**1.42**	**[0.88; 2.29]**	**100.0%**
Prediction interval						**[0.03; 59.35]**	

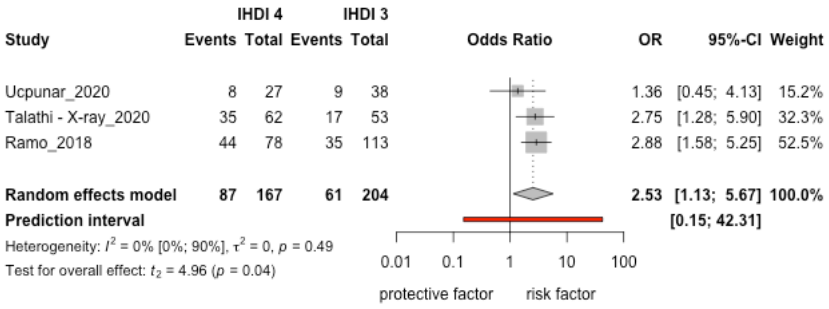
Heterogeneity: I^2 = 0% [0%; 90%], τ^2 = 0, p = 0.87
Test for overall effect: t_2 = 3.13 (p = 0.09)

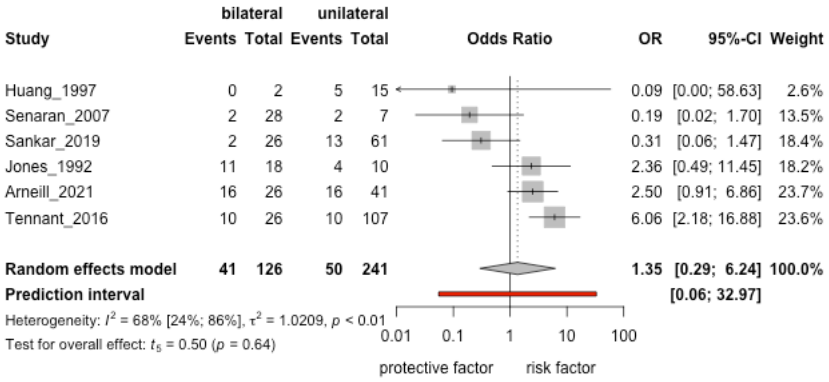


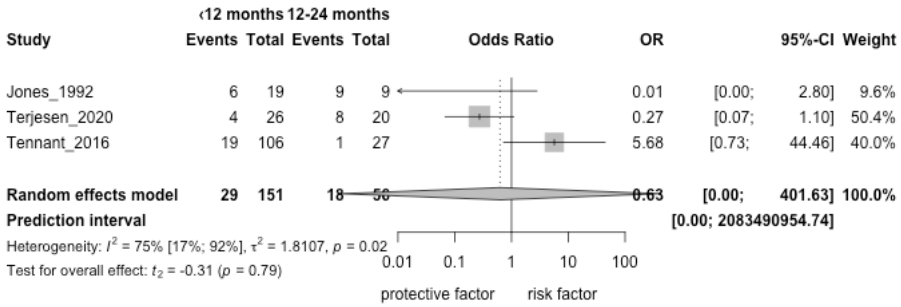

no previous traction
previous traction
Study
Events Total Events Total
Odds Ratio
OR 95%-CI Weight
Huang_1997 1 6 4 11 0.35 [0.03; 4.15] 3.4%
Sankar_2019 11 74 4 13 0.39 [0.10; 1.50] 11.5%
Sucato_2017 26 66 108 276 1.01 [0.58; 1.75] 68.5%
Elerson_2022 29 72 6 16 1.12 [0.37; 3.43] 16.6%
Random effects model 67 218 122 316 0.89 [0.46; 1.71] 100.0%
Prediction interval [0.33; 2.42]
Heterogeneity: I^2 = 0% [0%; 85%], τ^2 = 0, p = 0.50
Test for overall effect: t_3 = -0.57 (p = 0.61)
0.01 0.1 1 10 100
protective factor risk factor


male
female
Study
Events Total Events Total
Odds Ratio
OR 95%-CI Weight
Senaran_2007 0 7 4 28 0.08 [0.00; 46.40] 1.9%
Arneill_2021 4 11 28 56 0.57 [0.15; 2.17] 32.6%
Sankar_2019 3 12 12 75 1.75 [0.41; 7.42] 28.9%
Talathi - X-ray_2020 9 13 44 113 3.53 [1.02; 12.16] 36.5%
Random effects model 16 43 88 272 1.48 [0.31; 7.18] 100.0%
Prediction interval [0.11; 19.47]
Heterogeneity: I^2 = 36% [0%; 78%], τ^2 = 0.1562, p = 0.20
Test for overall effect: t_3 = 0.79 (p = 0.49)
0.01 0.1 1 10 100
protective factor risk factor


left
right
Study
Events Total Events Total
Odds Ratio
OR 95%-CI Weight
Barakat_2017 1 14 12 15 0.02 [0.00; 0.21] 4.7%
Sankar_2019 6 46 9 41 0.53 [0.17; 1.66] 21.1%
Talathi - X-ray_2020 30 74 23 52 0.86 [0.42; 1.76] 52.7%
Jones_1992 8 14 7 14 1.33 [0.30; 5.91] 12.2%
Huang_1997 4 12 1 5 2.00 [0.16; 24.33] 4.3%
Senaran_2007 3 20 1 15 2.47 [0.23; 26.46] 4.8%
Random effects model 52 180 53 142 0.75 [0.26; 2.12] 100.0%
Prediction interval [0.36; 1.56]
Heterogeneity: I^2 = 57% [0%; 83%], τ^2 < 0.0001, p = 0.04
Test for overall effect: t_5 = -0.72 (p = 0.51)
0.01 0.1 1 10 100
protective factor risk factor


IHDI 4
IHDI 3
Study
Events Total Events Total
Odds Ratio
OR 95%-CI Weight
Ucpunar_2020 8 27 9 38 1.36 [0.45; 4.13] 15.2%
Talathi - X-ray_2020 35 62 17 53 2.75 [1.28; 5.90] 32.3%
Ramo_2018 44 78 35 113 2.88 [1.58; 5.25] 52.5%
Random effects model 87 167 61 204 2.53 [1.13; 5.67] 100.0%
Prediction interval [0.15; 42.31]
Heterogeneity: I^2 = 0% [0%; 90%], τ^2 = 0, p = 0.49
Test for overall effect: t_2 = 4.96 (p = 0.04)
0.01 0.1 1 10 100
protective factor risk factor


bilateral
unilateral
Study
Events Total Events Total
Odds Ratio
OR 95%-CI Weight
Huang_1997 0 2 5 15 0.09 [0.00; 58.63] 2.6%
Senaran_2007 2 28 2 7 0.19 [0.02; 1.70] 13.5%
Sankar_2019 2 26 13 61 0.31 [0.06; 1.47] 18.4%
Jones_1992 11 18 4 10 2.36 [0.49; 11.45] 18.2%
Arneill_2021 16 26 16 41 2.50 [0.91; 6.86] 23.7%
Tennant_2016 10 26 10 107 6.06 [2.18; 16.88] 23.6%
Random effects model 41 126 50 241 1.35 [0.29; 6.24] 100.0%
Prediction interval [0.06; 32.97]
Heterogeneity: I^2 = 68% [24%; 86%], τ^2 = 1.0209, p < 0.01
Test for overall effect: t_5 = 0.50 (p = 0.64)
0.01 0.1 1 10 100
protective factor risk factor


‹12 months 12-24 months
Study
Events Total Events Total
Odds Ratio
OR 95%-CI Weight
Jones_1992 6 19 9 9 0.01 [0.00; 2.80] 9.6%
Terjesen_2020 4 26 8 20 0.27 [0.07; 1.10] 50.4%
Tennant_2016 19 106 1 27 5.68 [0.73; 44.46] 40.0%
Random effects model 29 151 18 56 0.63 [0.00; 401.63] 100.0%
Prediction interval [0.00; 2083490954.74]
Heterogeneity: I^2 = 75% [17%; 92%], τ^2 = 1.8107, p = 0.02
Test for overall effect: t_2 = -0.31 (p = 0.79)
0.01 0.1 1 10 100
protective factor risk factor