

Supplementary File 3. Effects of CONNECT intervention on Mean Levels of Outcomes Measures – Results from Linear Mixed Models Examining Mean Levels

	Effects of treatment (Site cluster adjusted)				Effects of treatment (Therapist cluster adjusted)				Effects of treatment (not cluster adjusted)		
	Mean (95% CI)	<i>P</i>	ICC	<i>d</i>	Mean (95% CI)	<i>P</i>	ICC	<i>d</i>	Mean (95% CI)	<i>P</i>	<i>d</i>
Adherence Outcomes											
Home-based adherence											
Week 1	0.46 (.02, .90)	.04		.32	0.47 (-.01, .94)	.04		.33	0.46 (.02, .90)	-0.32	.32
Week 4	0.28 (-.19, .76)	.24		.19	0.38 (-.12, .89)	.24		.26	0.28 (-.19, .75)	-0.19	.22
Week 12	0.59 (-.13, 1.06)	.01		.41	0.62 (.13, 1.11)	.01		.43	0.59 (.13, 1.06)	-0.41	.33
Week 24	0.17 (-.26, .60)	.44		.12	0.18 (-.27, .64)	.45		.13	0.17 (-.26, .60)	-0.12	.09
Overall	0.38 (.07, .69)	.03	<.001	.26	0.41 (.08, .75)	.03	<.01	.28	0.38 (.07, .69)	0.26	.23
Clinic-based adherence											
Week 1	0.14 (-.42, .70)	.58		.21	0.04 (-.28, .37)	.79		.06	0.14 (-.12, .40)	.29	.21
Week 4	-0.03 (-.59, 0.54)	.91		-.04	-0.12 (-.46, .22)	.48		-.18	-0.03 (-.31, .25)	.83	-.04
Week 12	0.14 (-.44, .72)	.61		.21	0.06 (-.31, .42)	.76		.09	0.16 (-.14, .46)	.28	.24
Overall	0.09 (-.47, .64)	.73	.08	.13	0.01 (-.30, .32)	.96	.10	.01	0.09 (-.32, .14)	.44	.13
Specific adherence to back exercises											
Week 1	4.45 (-3.74, 12.63)	.27		.07	3.94 (-4.25, 12.13)	.34		.06	4.20 (-2.65, 11.04)	.23	.06
Week 4	2.93 (-6.08, 11.94)	.51		.04	4.55 (-3.90, 12.99)	.29		.07	2.90 (-4.93, 10.74)	.47	.04
Week 12	7.26 (-3.07, 17.60)	.16		.11	7.80 (-1.53, 17.12)	.10		.12	7.19 (-2.24, 16.61)	.13	.11
Week 24	0.38 (-10.90, 11.67)	.95		.01	0.77 (-8.77, 10.31)	.87		.01	0.25 (-10.13, 10.64)	.96	.00
Overall	3.76 (-3.46, 10.97)	.28	<.001	0.06	4.26 (-1.35, 9.88)	.13	<.01	.07	3.63 (-1.55, 8.82)	.17	.06
Physical activity (METS/total)											
Week 1	-1282.37 (-5005.31, 2440.56)	.40		-.36	-498.27 (-2207.44, 1210.90)	.56		-.14	-541.04 (-2021.61, 939.53)	.47	-.15
Week 4	-1977.20 (-5659.39, -1704.99)	.22		-.56	-1143.23 (-2988.43, 701.96)	.22		-.32	-1240.26 (-2894.15, 413.63)	.14	-.35
Week 12	-1375.84 (-5071.38, 2319.70)	.37		-.39	-749.03 (-2559.00, 1060.94)	.41		-.21	-653.06 (-2232.77, 926.65)	.42	-.19

Week 24	-1346.10 (-5130.70, 2438.49)	.37		-0.38	-600.37 (-2184.05, 983.30)	.45		-0.17	-621.62 (-1964.93, 721.70)	.36	-0.18
Overall	-1495.38 (-5305.88, 2315.12)	.33	.02	-0.42	-747.73 (-2282.62, 787.16)	.33	.004	-0.21	-764 (-2057.92, 529.93)	.25	-0.22
Pain, Function, Quality of Life											
Pain intensity											
Week 4	-.37 (-1.28, .53)	.40		-.15	-.35 (-1.37, .68)	.50		-.14	-.36 (-1.16, .45)	.39	-.15
Week 12	-.17 (-1.05, .71)	.69		-.07	-.19 (-1.15, .78)	.70		-.08	-.15 (-.92, .62)	.70	-.06
Week 24	.17 (-.65, .98)	.67		.07	.27 (-.62, 1.16)	.54		.11	.19 (-.49, .86)	.59	.08
Overall	-.13 (-.91, .66)	.73	.03	-.05	-.09 (-0.95, 0.77)	.84	.002	-.04	-.11 (-0.72, 0.51)	.74	-.05
Pain Bothersomeness											
Week 4	-.13 (-.68, .42)	.62		-.11	-.17 (-.63, .29)	.46		-.15	-.13 (-.53, .27)	.53	-.11
Week 12	-.04 (-.59, .51)	.87		-.03	-.10 (-.56, .35)	.66		-.09	-.03 (-.44, .38)	.87	-.03
Week 24	-.08 (-.61, .45)	.73		-.07	-.08 (-.49, .33)	.69		-.07	-.09 (-.44, .26)	.62	-.08
Overall	-.08 (-.60, .43)	.72	.01	-.07	-.12 (-.51, .27)	.55	.01	-.10	-.08 (-.41, .25)	.62	-.07
Interference											
Week 4	-.35 (-.99, .29)	.26		-.31	-.36 (-.88, .17)	.18		-.32	-.42 (-.82, -.01)	.05	-.37
Week 12	-.29 (-.93, .35)	.35		-.25	-.24 (-.74, .26)	.34		-.21	-.35 (-.75, .06)	.09	-.31
Week 24	-.11 (-.74, .51)	.70		-.10	-.00 (-.49, .48)	.99		-.00	-.18 (-.56, .20)	.34	-.16
Overall	-.25 (-.86, .36)	.38	.01	-.22	-.20 (-.66, .26)	.38	.02	-.18	-.32 (-.65, -.02)	.07	-.28
Symptoms											
Week 4	-.11 (-.63, .42)	.68		-.14	-.07 (-.58, .45)	.80		-.09	-.12 (-.58, .33)	.60	-.16
Week 12	-.25 (-.79, .28)	.34		-.32	-.22 (-.75, .29)	.39		-.29	-.27 (-.74, .21)	.27	-.35
Week 24	-.01 (-.45, .46)	.98		-.01	-.04 (-.44, .36)	.83		-.05	-.00 (-.35, .34)	.98	-.00
Overall	-.12 (-.57, .33)	.57	.003	-.16	-.11 (-.50, .28)	.57	.01	-.14	-.13 (-.46, .20)	.44	-.17
Treatment Satisfaction											
Week 4	.16 (-.18, .49)	.34		.19	.20 (-.13, .54)	.24		.24	.16 (-.14, .45)	.29	.19
Week 12	-.17 (-.52, .19)	.39		-.20	-.17 (-.54, .20)	.37		-.20	-.17 (-.49, .15)	.31	-.20
Week 24	.06 (-.24, .35)	.69		.07	.11 (-.18, .40)	.47		.13	.06 (-.19, .30)	.65	.07
Overall	.02 (-.26, .29)	.90	.002	.02	.05 (-.22, .31)	.72	.01	.06	.02 (-.19, .23)	.89	.02
Global perception of recovery											
Week 4	.58 (-.26, 1.43)	.16		.27	.42 (-.28, 1.12)	.23		.19	.52 (-.11, 1.16)	.11	.24
Week 12	.81 (-.05, 1.68)	.06		.37	.68 (-.04, 1.41)	.06		.31	.75 (.08, 1.42)	.03	.35

Week 24	.43 (-.42, 1.29)	.29		.20	.28 (-.45, 1.00)	.45		.13	.37 (-.28, 1.02)	.27	.17
Overall	.61 (-.19, 1.41)	.12	.03	.28	.46 (-0.14, 1.06)	.13	.03	.21	.55 (.03, 1.07)	.04	.25
Disability, RMDQ score											
Week 4	-.78 (-3.29, 1.72)	.51		-.17	-.71 (-2.65, 1.23)	.47		-.15	-.90 (-2.52, .74)	.28	-.19
Week 12	-.56 (-3.09, 1.96)	.64		-.12	-.62 (-2.57, 1.33)	.53		-.13	-.65 (-2.30, 1.00)	.44	-.14
Week 24	.10 (-2.37, 2.57)	.93		.02	.06 (-1.94, 1.82)	.95		.01	.02 (-1.57, 1.54)	.98	.00
Overall	-.42 (-2.82, 1.99)	.71	0.01	-.09	-.46 (-2.18, 1.26)	.59	.02	-.10	-.52 (-1.88, .84)	.45	-.11
Patient specific function											
Week 4	.48 (-.55, 1.50)	.32		.24	.39 (-.43, 1.21)	.34		.19	.41 (-.23, 1.05)	.20	.20
Week 12	.49 (-.55, 1.53)	.32		.24	.45 (-.41, 1.31)	.30		.22	.42 (-.27, 1.11)	.23	.21
Week 24	.57 (-.51, 1.66)	.28		.28	.42 (-.54, 1.38)	.38		.21	.50 (-.29, 1.29)	.21	.25
Overall	.51 (-.49, 1.52)	.27	.07	.25	.42 (-.37, 1.21)	.29	.16	.21	.44 (-.15, 1.04)	.14	.22
Quality of life											
Week 4	-.06 (-.13, .02)	.14		-.27	-.06 (-.13, .01)	.10		-.27	-.06 (-.13, .01)	.12	-.27
Week 12	-.04 (-.11, .04)	.30		-.18	-.04 (-.11, .04)	.32		-.18	-.04 (-.11, .03)	.28	-.18
Week 24	-.03 (-.10, .04)	.33		-.14	-.02 (-.08, .05)	.63		-.09	-.03 (-.10, .03)	.31	-.14
Overall	-.04 (-.11, .02)	.18	.002	-.18	-.04 (-.10, .02)	.20	<.01	-.18	-.04 (-.10, .01)	.13	-.18
Motivational Outcomes											
Fear avoidance											
Week 4	-1.09 (-4.08, 1.91)	.45		-.16	-.60 (-3.31, 2.11)	.66		-.09	-1.03 (-3.49, 1.44)	.41	-.15
Week 12	-1.33 (-4.55, 1.88)	.40		-.19	-1.16 (-4.22, 1.89)	.45		-.17	-1.29 (-4.10, 1.52)	.37	-.19
Week 24	-0.80 (-4.23, 2.64)	.64		-.11	-.19 (-3.69, 3.32)	.92		-.03	-0.75 (-3.84, 2.34)	.63	-.11
Overall	-1.07 (-3.93, 1.78)	.42	.002	-.15	-.65 (-3.19, 1.89)	.61	.01	-.09	-1.02 (-3.23, 1.19)	.36	-.15
Perceived competence to follow recommendations											
Immediately post-initial treatment	.19 (-.04, .43)	.10		.33	.19 (-.14, .51)	.27		.33	.21 (.02, .40)	.03	.37
Week 4	.39 (.06, .72)	.02		.68	.39 (-.01, .76)	.04		.68	.41 (.10, .71)	.01	.72
Week 12	.39 (-.03, .82)	.07		.68	.42 (.04, .79)	.03		.74	.41 (-.01, .82)	.05	.72
Week 24	.60 (-.08, 1.12)	.02		1.05	.54 (.15, .92)	.01		.95	.61 (.10, 1.12)	.02	1.07
Overall	.40 (0.11, 0.68)	.01	<.001	.70	.38 (.12, .64)	.01	<.001	.67	.41 (.15, .67)	.002	.72
Autonomous motivation to follow recommendations											
Immediately post-initial treatment	0.16 (-.14, .46)	.29		.30	.22 (-.03, .47)	.09		.41	.19 (-.04, .43)	.11	.35

Week 4	0.03 (-.30, 0.35)	.87		.06	.07 (-.21, .36)	.89		.13	.06 (-.21, .33)	.65	.11
Week 12	-.10 (-.42, .22)	.53		-.19	-.02 (-.30, .26)	.89		-.04	-.05 (-.32, .21)	.68	-.09
Week 24	-.10 (-.35, .16)	.41		-.19	-.04 (-.21, .13)	.67		-.07	-.07 (-.22, .08)	.35	-.13
Overall	.00 (-0.26, 0.25)	.98	.007	.00	.06 (-0.12, 0.24)	.52	.003	.11	.03 (-0.13, 0.20)	.71	.06
Controlled motivation to follow recommendations											
Immediately post-initial treatment	-.10 (-.49, .29)	.57		-.08	-.21 (-.53, .12)	.21		-.16	-.11 (-.42, .21)	.51	-.09
Week 4	-.08 (-.58, .43)	.76		-.06	-.03 (-.53, .47)	.91		-.02	-.08 (-.56, .39)	.73	-.06
Week 12	.09 (-.39, .58)	.69		.07	.13 (-.34, .61)	.58		.10	.09 (-.37, .54)	.71	.07
Week 24	-.15 (-.69, .38)	.57		-.12	-.19 (-.73, .36)	.50		-.15	-.16 (-.68, .35)	.53	-.12
Overall	-.06 (-.35, .46)	.76	.001	-.05	-.07 (-.45, .30)	.70	<.001	-.05	-.07 (-.42, .29)	.71	-.05
Amotivation											
Immediately post-initial treatment	-.26 (-.70, .17)	.22		-.27	-.27 (-.60, .06)	.10		-.28	-.27 (-.55, .00)	.05	-.28
Week 4	-.26 (-.75, .23)	.29		-.27	-.17 (-.75, .41)	.56		-.17	-.25 (-.80, .31)	.38	-.26
Week 12	-.60 (-1.10, -.10)	.02		-.61	-.55 (-1.11, .02)	.06		-.56	-.58 (-1.11, .04)	.04	-.59
Week 24	-.50 (-1.03, .04)	.07		-.51	-.49 (-1.12, .14)	.13		-.50	-.48 (-1.05, .09)	.10	-.49
Overall	-.40 (-.80, .01)	.05	.001	-.41	-.37 (-.75, .01)	.06	.005	-.38	-.31 (-.58, .05)	.02	-.32

Note: Standardized mean difference effect sizes (*d*) were calculated using baseline SD from control arm participants. Where baseline measures were not relevant (adherence variables), the control arm's SD at each time point was employed to calculate *d*.

