

Extended Data Figure Legends

Ext. Data Figure 1. Changes in primary outcomes from baseline to post-intervention for parents

Ext. Data Figure 2. Changes in primary outcomes over time (T1 – T4) for parents

Ext. Data Figure 3. Changes in primary outcomes from baseline to post-intervention for adult children

Ext. Data Figure 4. Changes in primary outcomes over time (T1 – T4) for adult children

Extended Data Table Titles

Ext. Data Table 1. *F*-Statistics and *p*-values from longitudinal linear mixed models testing the effects of technology condition, cognitive status, and time (T1 to T4) on primary outcomes for parents

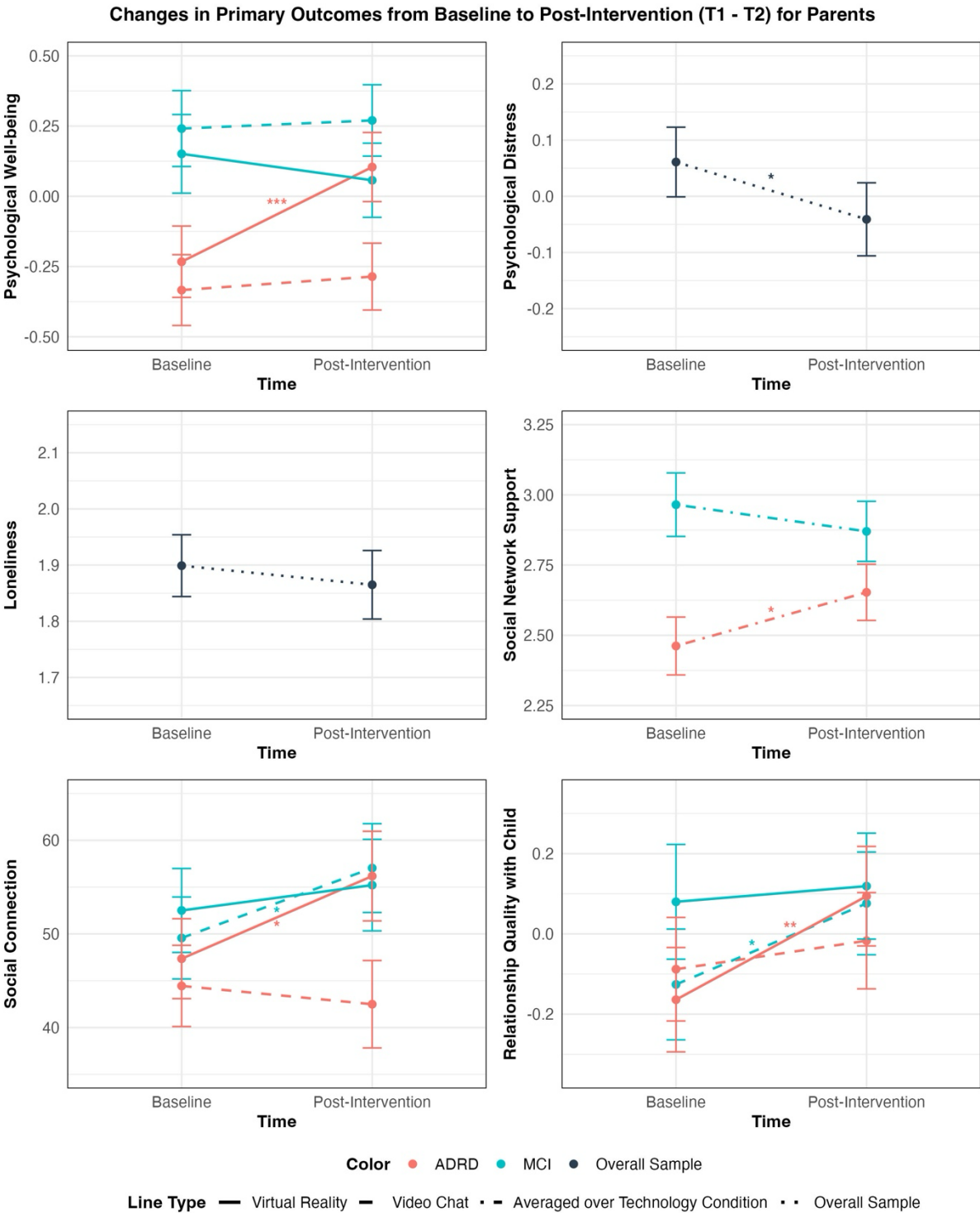
Ext. Data Table 2. Changes in parents' primary outcomes from baseline (T1) to all post-intervention assessments (T2 to T4) by technology condition and cognitive status

Ext. Data Table 3. *F*-Statistics and *p*-values from longitudinal linear mixed models testing the effects of technology condition, cognitive status, and time (T1 to T4) on primary outcomes for adult children

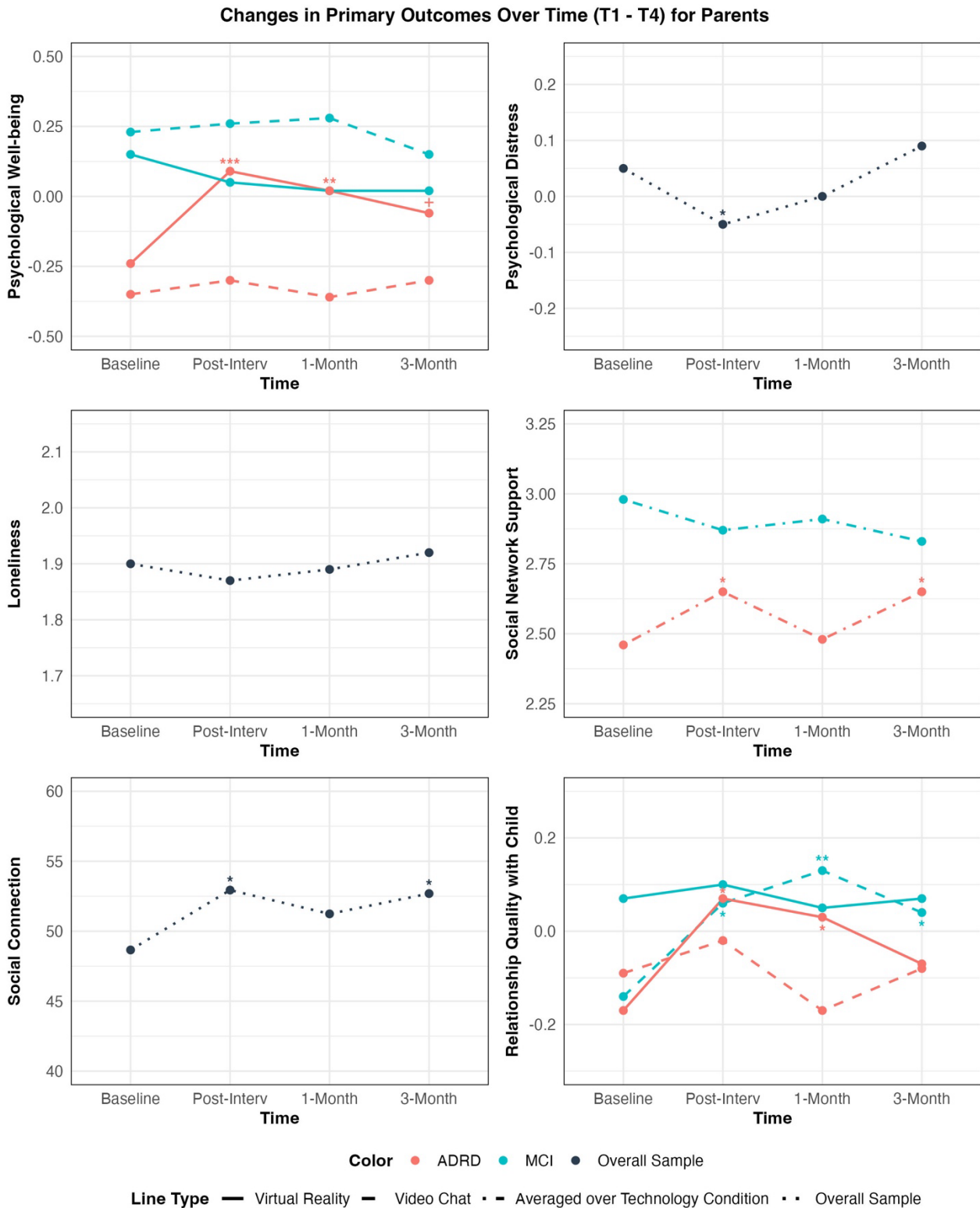
Ext. Data Table 4. Changes in adult children's primary outcomes from baseline (T1) to all post-intervention assessments (T2 to T4) in overall sample and by technology condition

Ext. Data Table 5. Standardized parameter estimates from linear regression (ANCOVA) models testing the effects of technology condition and cognitive status on secondary outcomes for parents and adult children

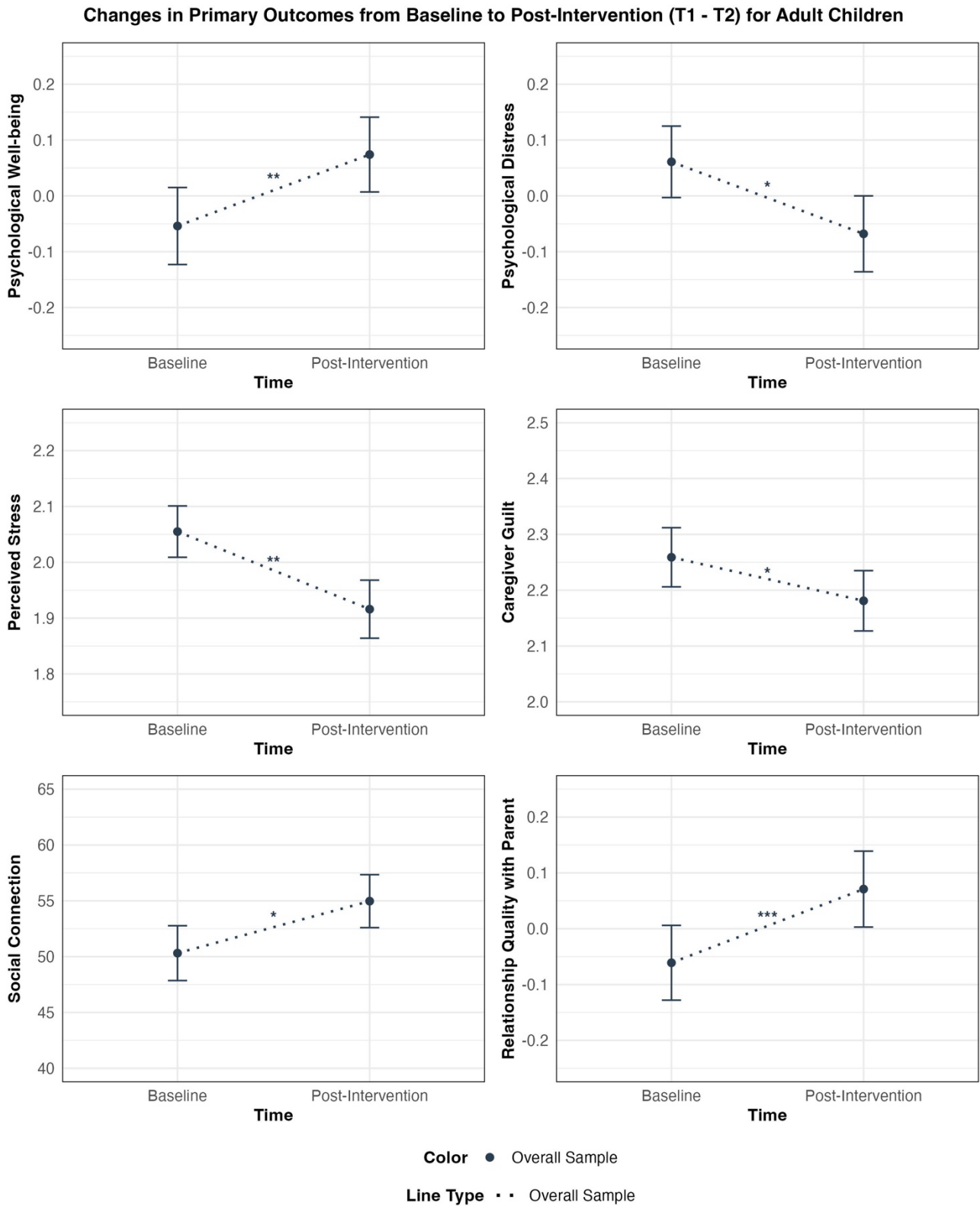
Ext. Data Figure 1. Changes in primary outcomes from baseline to post-intervention for parents



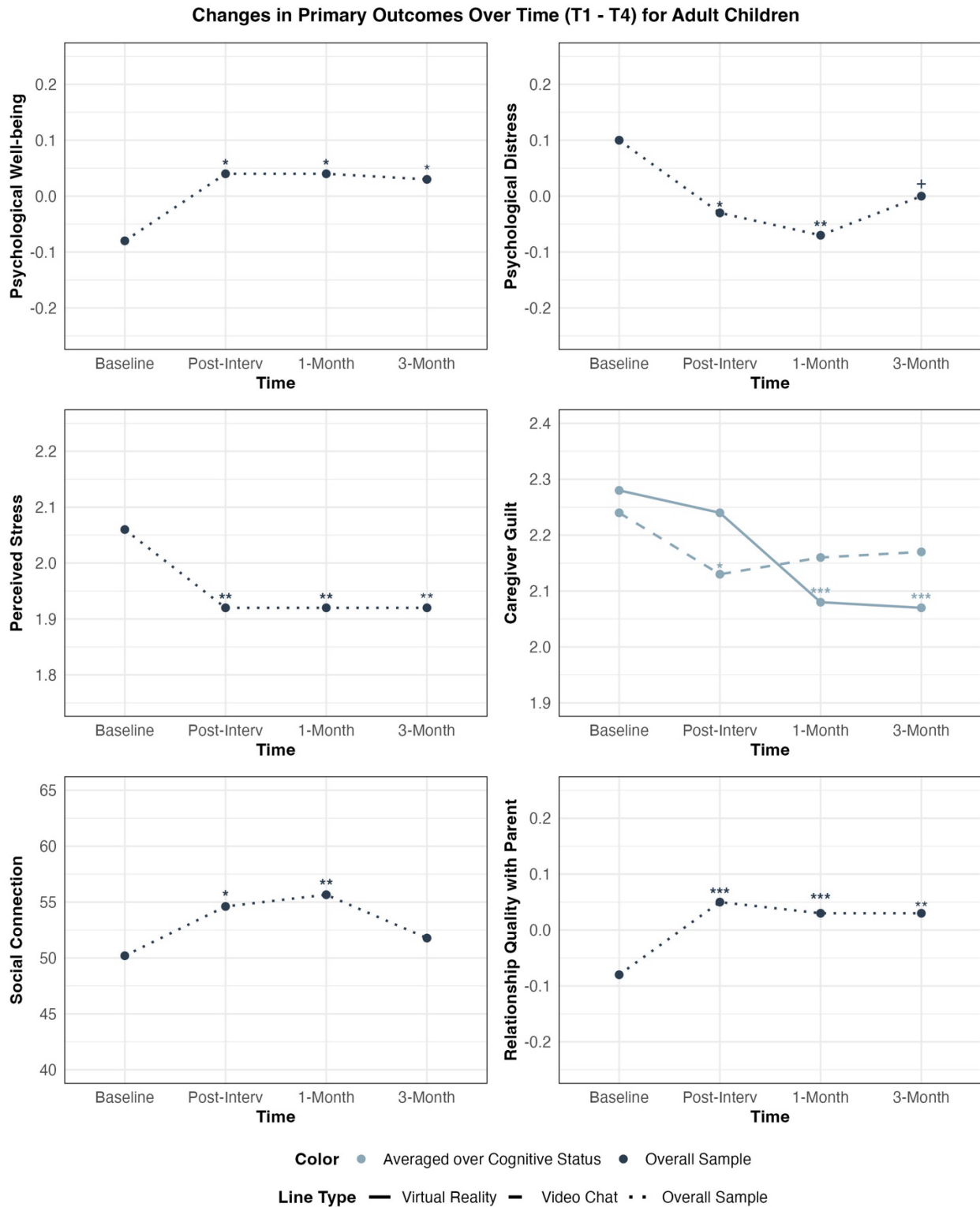
Ext. Data Figure 2. Changes in primary outcomes over time (T1 – T4) for parents



Ext. Data Figure 3. Changes in primary outcomes from baseline to post-intervention for adult children



Ext. Data Figure 4. Changes in primary outcomes over time (T1 – T4) for adult children



Extended Data Table 1: *F*-Statistics and *p*-values from longitudinal linear mixed models testing the effects of technology condition, cognitive status, and time (T1 to T4) on primary outcomes for parents

Parents Primary Outcome Variables	Main Effects			Interactions				Covariates		
	Time (T1 to T4)	Technology Condition (VC vs. VR)	Cognitive Status (MCI vs. ADRD)	Time × Technology	Time × Cog Status	Technology × Cog Status	Time × Technology × Cog Status	Age	Gender (M vs. F)	Chronic Health
	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value
Psychological well-being	1.38 <i>p</i> = .249	0.19 <i>p</i> = .662	7.24 <i>p</i> = .008	0.33 <i>p</i> = .806	2.91 <i>p</i> = .035	3.42 <i>p</i> = .066	2.73 <i>p</i> = .044	0.16 <i>p</i> = .686	2.22 <i>p</i> = .138	2.53 <i>p</i> = .114
Psychological distress	2.74 <i>p</i> = .044	0.01 <i>p</i> = .931	3.08 <i>p</i> = .081	0.03 <i>p</i> = .992	0.58 <i>p</i> = .630	4.80 <i>p</i> = .030	1.31 <i>p</i> = .272	5.12 <i>p</i> = .025	0.00 <i>p</i> = .983	2.48 <i>p</i> = .117
Loneliness	0.38 <i>p</i> = .768	0.98 <i>p</i> = .324	0.15 <i>p</i> = .700	0.41 <i>p</i> = .743	0.47 <i>p</i> = .706	0.13 <i>p</i> = .719	0.66 <i>p</i> = .579	1.05 <i>p</i> = .307	0.71 <i>p</i> = .400	2.12 <i>p</i> = .147
Social network support ¹	0.44 <i>p</i> = .723	0.43 <i>p</i> = .511	6.82 <i>p</i> = .010	1.72 <i>p</i> = .162	3.47 <i>p</i> = .017	0.02 <i>p</i> = .892	0.50 <i>p</i> = .681	0.003 <i>p</i> = .956	0.35 <i>p</i> = .553	0.17 <i>p</i> = .678
Social connection ²	2.46 <i>p</i> = .063	1.39 <i>p</i> = .241	1.77 <i>p</i> = .186	0.30 <i>p</i> = .823	0.96 <i>p</i> = .413	0.96 <i>p</i> = .328	1.40 <i>p</i> = .244	0.28 <i>p</i> = .596	6.16 <i>p</i> = .014	3.56 <i>p</i> = .061
Relationship quality with child	3.62 <i>p</i> = .013	0.20 <i>p</i> = .653	0.81 <i>p</i> = .369	0.11 <i>p</i> = .952	0.51 <i>p</i> = .678	0.001 <i>p</i> = .980	3.43 <i>p</i> = .017	0.27 <i>p</i> = .601	0.58 <i>p</i> = .446	0.81 <i>p</i> = .370

Note. T1 = Baseline. T2 = Immediate post-intervention. T3 = 1-Month post-intervention. T4 = 3-Month post-intervention. VC = Video chat. VR = Virtual reality. MCI = Mild cognitive impairment. ADRD = mild to moderate Alzheimer's disease or related dementia. M = Male. F = Female. *F*-tests for fixed effects from linear mixed models with restricted maximum likelihood estimation and random intercepts. Key effects relevant to hypothesis testing are shown in **bold**. Unless otherwise noted, *n* = 181. ¹*n* = 183. ²*n* = 172. See Extended Data Figure 3 for covariate-adjusted mean changes by technology condition and cognitive status, difference-in-differences contrasts, and corresponding effect sizes. See Table S6 for covariate-adjusted mean changes for the overall sample.

Extended Data Table 2: Changes in parents' primary outcomes from baseline (T1) to all post-intervention assessments (T2 to T4) by technology condition and cognitive status

Parents Primary Outcome Variables	Within-Group Change From Baseline				Between-Group Difference in Change		
	Video Chat		Virtual Reality		Video Chat vs. Virtual Reality (DiD Contrast)		
	Tn - T1	p-value	Tn - T1	p-value	VR - VC	p-value	Effect Size
Psychological well-being							
MCI							
Post-Interv (T2)	.03 (-.14, .19)	.754	-.10 (-.27, .07)	.266	-.12 (-.36, .11)	.308	-.14 (-.40, .13)
1-Month (T3)	.05 (-.14, .24)	.629	-.13 (-.33, .07)	.208	-.17 (-.45, .10)	.214	-.20 (-.50, .11)
3-Month (T4)	-.08 (-.28, .12)	.415	-.13 (-.34, .08)	.210	-.05 (-.34, .24)	.731	-.06 (-.38, .27)
ADRD							
Post-Interv (T2)	.05 (-.11, .20)	.568	.33 (.17, .50)	<.001	.29 (.06, .51)	.013	.32 (.07, .57)
1-Month (T3)	-.02 (-.20, .16)	.852	.26 (.07, .45)	.008	.28 (.01, .54)	.040	.31 (.02, .61)
3-Month (T4)	.05 (-.14, .24)	.599	.18 (-.02, .38)	.072	.13 (-.14, .41)	.347	.15 (-.16, .46)
Psychological distress							
MCI							
Post-Interv (T2)	-.09 (-.28, .09)	.323	-.08 (-.27, .11)	.436	.02 (-.25, .28)	.902	.02 (-.30, .34)

Parents Primary Outcome Variables	Within-Group Change From Baseline				Between-Group Difference in Change		
	Video Chat		Virtual Reality		Video Chat vs. Virtual Reality (DiD Contrast)		
	<i>T_n</i> - <i>T</i> ₁	<i>p</i> -value	<i>T_n</i> - <i>T</i> ₁	<i>p</i> -value	VR - VC	<i>p</i> -value	Effect Size
1-Month (T3)	-.05 (-.28, .17)	.630	-.15 (-.38, .09)	.215	-.09 (-.41, .23)	.573	-.11 (-.51, .28)
3-Month (T4)	.11 (-.13, .34)	.381	-.07 (-.32, .18)	.561	-.18 (-.52, .17)	.305	-.22 (-.64, .20)
ADRD							
Post-Interv (T2)	-.09 (-.27, .08)	.303	-.12 (-.30, .06)	.190	-.03 (-.28, .22)	.814	-.04 (-.35, .27)
1-Month (T3)	-.03 (-.24, .18)	.758	.04 (-.19, .26)	.759	.07 (-.24, .38)	.664	.08 (-.30, .46)
3-Month (T4)	-.04 (-.26, .19)	.754	.18 (-.06, .42)	.141	.22 (-.12, .55)	.199	.27 (-.14, .67)
Loneliness							
MCI							
Post-Interv (T2)	-.08 (-.27, .10)	.391	-.08 (-.28, .11)	.391	-.003 (-.27, .26)	.981	-.004 (-.37, .36)
1-Month (T3)	-.12 (-.33, .08)	.238	.07 (-.15, .28)	.550	.19 (-.11, .48)	.212	.25 (-.14, .65)
3-Month (T4)	-.01 (-.21, .20)	.962	-.02 (-.24, .20)	.860	-.01 (-.31, .29)	.925	-.02 (-.42, .39)
ADRD							
Post-Interv (T2)	.03 (-.15, .20)	.775	.02 (-.16, .21)	.819	-.004 (-.26, .25)	.975	-.01 (-.35, .34)

Parents Primary Outcome Variables	Within-Group Change From Baseline				Between-Group Difference in Change		
	Video Chat		Virtual Reality		Video Chat vs. Virtual Reality (DiD Contrast)		
	<i>T_n</i> - <i>T</i> 1	<i>p</i> -value	<i>T_n</i> - <i>T</i> 1	<i>p</i> -value	VR - VC	<i>p</i> -value	Effect Size
1-Month (T3)	.02 (-.18, .22)	.862	.02 (-.18, .23)	.837	.004 (-.28, .29)	.978	.01 (-.38, .39)
3-Month (T4)	.03 (-.17, .23)	.770	.10 (-.11, .31)	.361	.07 (-.22, .36)	.643	.09 (-.30, .48)
Social network support¹							
MCI							
Post-Interv (T2)	-.06 (-.30, .18)	.643	-.16 (-.41, .09)	.199	-.11 (-.45, .24)	.545	-.11 (-.45, .23)
1-Month (T3)	-.20 (-.45, .06)	.128	.05 (-.21, .32)	.695	.25 (-.12, .61)	.184	.24 (-.11, .60)
3-Month (T4)	-.20 (-.46, .06)	.123	-.09 (-.36, .18)	.508	.11 (-.26, .48)	.558	.11 (-.25, .47)
ADRD							
Post-Interv (T2)	.11 (-.12, .34)	.357	.27 (.03, .50)	.029	.16 (-.17, .49)	.348	.15 (-.17, .48)
1-Month (T3)	-.12 (-.36, .12)	.322	.15 (-.10, .41)	.239	.27 (-.08, .63)	.125	.27 (-.07, .61)
3-Month (T4)	.11 (-.14, .35)	.392	.27 (.01, .53)	.043	.16 (-.19, .52)	.370	.16 (-.19, .51)
Social connection²							
MCI							

Parents Primary Outcome Variables	Within-Group Change From Baseline				Between-Group Difference in Change		
	Video Chat		Virtual Reality		Video Chat vs. Virtual Reality (DiD Contrast)		
	Tn - T1	p-value	Tn - T1	p-value	VR - VC	p-value	Effect Size
Post-Interv (T2)	7.40 (0.66, 14.13)	.031	3.20 (-3.78, 10.17)	.368	-4.20 (-13.89, 5.50)	.395	-.15 (-.48, .19)
1-Month (T3)	3.93 (-3.58, 11.43)	.304	2.25 (-5.45, 9.96)	.565	-1.67 (-12.43, 9.08)	.760	-.06 (-.43, .32)
3-Month (T4)	3.43 (-4.34, 11.20)	.385	0.45 (-7.53, 8.43)	.911	-2.98 (-14.12, 8.16)	.599	-.10 (-.49, .28)
ADRD							
Post-Interv (T2)	-1.69 (-8.46, 5.09)	.625	8.24 (1.31, 15.18)	.020	9.93 (0.24, 19.62)	.045	.35 (.01, .68)
1-Month (T3)	-1.96 (-9.65, 5.73)	.616	6.13 (-1.59, 13.84)	.119	8.09 (-2.81, 18.98)	.145	.28 (-.10, .66)
3-Month (T4)	2.98 (-4.80, 10.76)	.451	9.27 (1.07, 17.46)	.027	6.29 (-5.01, 17.59)	.274	.22 (-.17, .61)
Relationship quality with child							
MCI							
Post-Interv (T2)	.20 (.04, .36)	.015	.03 (-.13, .20)	.689	-.17 (-.40, .07)	.160	-.19 (-.46, .07)
1-Month (T3)	.27 (.09, .44)	.003	-.02 (-.20, .17)	.867	-.28 (-.53, -.03)	.027	-.32 (-.61, -.04)
3-Month (T4)	.18 (.003, .35)	.046	-.002 (-.19, .18)	.981	-.18 (-.43, .07)	.162	-.21 (-.50, .08)
ADRD							

Parents Primary Outcome Variables	Within-Group Change From Baseline				Between-Group Difference in Change		
	Video Chat		Virtual Reality		Video Chat vs. Virtual Reality (DiD Contrast)		
	Tn - T1	p-value	Tn - T1	p-value	VR - VC	p-value	Effect Size
Post-Interv (T2)	.07 (-.09, .22)	.399	.23 (.07, .40)	.005	.17 (-.06, .39)	.139	.19 (-.06, .45)
1-Month (T3)	-.08 (-.25, .09)	.344	.20 (.02, .37)	.030	.28 (.03, .52)	.026	.32 (.04, .59)
3-Month (T4)	.01 (-.16, .18)	.927	.10 (-.08, .28)	.259	.09 (-.15, .34)	.450	.11 (-.17, .39)

Note. MCI = Mild Cognitive Impairment. ADRD = mild to moderate Alzheimer's disease or related dementia. VR = Virtual Reality. VC = Video chat. DiD = difference-in-differences contrast. Unless otherwise noted, $n = 181$. ¹ $n = 183$. ² $n = 172$. Data are estimated mean differences (95% CIs) and p -values for fixed effects from linear mixed models (Technology Condition $\times$ Cognitive Status $\times$ Time) controlling for age, sex, and chronic health conditions. Positive mean differences indicate increases in scores from baseline (T1) to post-intervention (T2), 1-month follow-up (T3), or 3-month follow-up (T4); negative values indicate decreases. Effect size was calculated by (VR - VC) / pooled standard deviation at baseline.

Extended Data Table 3: *F*-Statistics and *p*-values from longitudinal linear mixed models testing the effects of technology condition, cognitive status, and time (T1 to T4) on primary outcomes for adult children

Adult Children Primary Outcome Variables	Main Effects			Interactions				Covariates	
	Time (T1 to T4)	Technology Condition (VC vs. VR)	Cognitive Status (parent) (MCI vs. ADRD)	Time × Technology	Time × Cog Status	Technology × Cog Status	Time × Technology × Cog Status	Age	Gender (M vs. F)
	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value	<i>F</i> <i>p</i> -value
Psychological well-being	2.85 <i>p</i> = .038	3.68 <i>p</i> = .057	0.59 <i>p</i> = .445	0.43 <i>p</i> = .731	0.86 <i>p</i> = .462	1.26 <i>p</i> = .263	2.54 <i>p</i> = .056	2.08 <i>p</i> = .151	0.59 <i>p</i> = .445
Psychological distress	3.42 <i>p</i> = .017	3.67 <i>p</i> = .057	0.001 <i>p</i> = .977	1.33 <i>p</i> = .265	1.92 <i>p</i> = .125	0.23 <i>p</i> = .633	0.74 <i>p</i> = .531	3.54 <i>p</i> = .062	0.000 <i>p</i> = .986
Perceived stress	4.73 <i>p</i> = .003	4.10 <i>p</i> = .044	0.08 <i>p</i> = .780	0.70 <i>p</i> = .571	1.49 <i>p</i> = .217	0.03 <i>p</i> = .857	0.61 <i>p</i> = .608	7.20 <i>p</i> = .008	0.10 <i>p</i> = .750
Caregiver guilt ¹	5.01 <i>p</i> = .002	0.002 <i>p</i> = .962	3.42 <i>p</i> = .066	2.92 <i>p</i> = .034	0.04 <i>p</i> = .988	4.65 <i>p</i> = .032	1.54 <i>p</i> = .205	5.73 <i>p</i> = .018	0.03 <i>p</i> = .865
Social connection ¹	4.15 <i>p</i> = .007	0.01 <i>p</i> = .945	1.76 <i>p</i> = .187	0.52 <i>p</i> = .672	0.62 <i>p</i> = .602	0.38 <i>p</i> = .539	0.17 <i>p</i> = .919	1.39 <i>p</i> = .240	1.83 <i>p</i> = .178
Relationship quality with parent ¹	6.18 <i>p</i> < .001	0.11 <i>p</i> = .738	1.76 <i>p</i> = .186	1.48 <i>p</i> = .220	0.86 <i>p</i> = .464	0.000 <i>p</i> = .983	0.70 <i>p</i> = .553	0.21 <i>p</i> = .648	0.002 <i>p</i> = .964

Note. T1 = Baseline. T2 = Immediate post-intervention. T3 = 1-Month post-intervention. T4 = 3-Month post-intervention. VC = Video chat. VR = Virtual reality. MCI = Mild cognitive impairment. ADRD = mild to moderate Alzheimer's disease or related dementia. M = Male. F = Female. *F*-tests for fixed effects from linear mixed models with restricted maximum likelihood estimation and random intercepts. Key effects relevant to hypothesis testing are shown in **bold**. Unless otherwise noted, *n* = 182. ¹ *n* = 180. See Extended Data Figure 7 for covariate-adjusted mean changes by technology condition, difference-in-differences contrasts, and corresponding effect sizes.

Extended Data **Table 4:** Changes in adult children's primary outcomes from baseline (T1) to all post-intervention assessments (T2 to T4) in overall sample and by technology condition

Adult Children Primary Outcome Variables	Within-Group Change From Baseline						Between-Group Difference in Change		
	Overall Sample		Video Chat		Virtual Reality		Video Chat vs. Virtual Reality (DiD Contrast)		
	T _n - T ₁	<i>p</i> -value	T _n - T ₁	<i>p</i> -value	T _n - T ₁	<i>p</i> -value	VR - VC	<i>p</i> -value	Effect Size
Psychological well-being									
Post-Interv (T2)	.12 (.03, .21)	.010	.11 (-.02, .23)	.101	.13 (.002, .27)	.046	.03 (-.16, .21)	.766	.03 (-.17, .23)
1-Month (T3)	.12 (.02, .22)	.018	.10 (-.04, .24)	.155	.14 (-.003, .28)	.055	.04 (-.16, .24)	.700	.04 (-.17, .26)
3-Month (T4)	.11 (.01, .21)	.031	.05 (-.09, .19)	.443	.17 (.02, .31)	.024	.11 (-.09, .31)	.274	.12 (-.10, .35)
Psychological distress									
Post-Interv (T2)	-.13 (-.24, -.02)	.021	-.07 (-.22, .08)	.359	-.19 (-.35, -.03)	.020	-.12 (-.34, .10)	.297	-.14 (-.39, .12)
1-Month (T3)	-.18 (-.29, -.07)	.002	-.14 (-.30, .02)	.080	-.21 (-.37, -.05)	.011	-.07 (-.29, .15)	.544	-.08 (-.34, .18)
3-Month (T4)	-.11 (-.22, .01)	.069	.01 (-.15, .16)	.933	-.21 (-.38, -.05)	.009	-.22 (-.45, .003)	.053	-.26 (-.52, .003)
Perceived stress									
Post-Interv (T2)	-.14 (-.23, -.05)	.003	-.17 (-.30, -.05)	.006	-.10 (-.23, .03)	.117	.07 (-.11, .25)	.441	.11 (-.17, .40)
1-Month (T3)	-.14 (-.23, -.05)	.003	-.19 (-.32, -.07)	.003	-.08 (-.21, .05)	.219	.11 (-.07, .29)	.218	.18 (-.10, .47)

Adult Children Primary Outcome Variables	Within-Group Change From Baseline						Between-Group Difference in Change		
	Overall Sample		Video Chat		Virtual Reality		Video Chat vs. Virtual Reality (DiD Contrast)		
	Tn - T1	p-value	Tn - T1	p-value	Tn - T1	p-value	VR - VC	p-value	Effect Size
3-Month (T4)	-.14 (-.23, -.05)	.002	-.15 (-.27, -.02)	.022	-.14 (-.27, -.01)	.037	.01 (-.17, .19)	.920	.01 (-.27, .30)
Caregiver guilt¹									
Post-Interv (T2)	-.08 (-.15, -.001)	.047	-.11 (-.22, -.01)	.031	-.04 (-.15, .07)	.496	.08 (-.07, .23)	.311	.11 (-.10, .32)
1-Month (T3)	-.14 (-.22, -.06)	<.001	-.08 (-.20, .03)	.150	-.20 (-.31, -.08)	<.001	-.12 (-.28, .05)	.159	-.16 (-.39, .06)
3-Month (T4)	-.14 (-.23, -.06)	<.001	-.07 (-.19, .04)	.211	-.21 (-.33, -.10)	<.001	-.14 (-.30, .03)	.096	-.20 (-.42, .03)
Social connection¹									
Post-Interv (T2)	4.41 (1.04, 7.79)	.011	6.26 (1.57, 10.95)	.009	2.57 (-2.29, 7.42)	.300	-3.69 (-10.45, 3.06)	.283	-.11 (-.32, .09)
1-Month (T3)	5.46 (2.00, 8.92)	.002	7.32 (2.50, 12.15)	.003	3.60 (-1.36, 8.56)	.154	-3.72 (-10.65, 3.20)	.291	-.11 (-.33, .10)
3-Month (T4)	1.59 (-1.90, 5.07)	.371	3.07 (-1.79, 7.92)	.215	0.10 (-4.89, 5.09)	.968	-2.97 (-9.93, 4.00)	.403	-.09 (-.30, .12)
Relationship quality with parent¹									
Post-Interv (T2)	.13 (.07, .19)	<.001	.18 (.10, .27)	<.001	.08 (-.01, .17)	.081	-.10 (-.23, .02)	.101	-.12 (-.26, .02)
1-Month (T3)	.11 (.04, .18)	.002	.16 (.06, .25)	.002	.06 (-.04, .16)	.230	-.10 (-.24, .04)	.180	-.11 (-.27, .05)

Adult Children Primary Outcome Variables	Within-Group Change From Baseline						Between-Group Difference in Change		
	Overall Sample		Video Chat		Virtual Reality		Video Chat vs. Virtual Reality (DiD Contrast)		
	Tn - T1	p-value	Tn - T1	p-value	Tn - T1	p-value	VR - VC	p-value	Effect Size
3-Month (T4)	.10 (.03, .17)	.006	.10 (.001, .20)	.047	.10 (-.004, .20)	.058	-.002 (-.15, .14)	.983	-.002 (-.17, .16)

Note. VR = Virtual reality. VC = Video chat. DiD = difference-in-differences contrast. Unless otherwise noted, $n = 182$. ¹ $n = 180$. Data are estimated mean differences (95% CIs) and p -values for fixed effects from linear mixed models (Technology Condition $\times$ Cognitive Status $\times$ Time) controlling for age and sex. Positive mean differences indicate increases in scores from baseline (T1) to post-intervention (T2), 1-month follow-up (T3), or 3-month follow-up (T4); negative values indicate decreases. Effect size was calculated by (VR - VC) / pooled standard deviation at baseline.

Extended Data Table 5: Standardized parameter estimates from linear regression (ANCOVA) models testing the effects of technology condition and cognitive status on secondary outcomes for parents and adult children

Secondary Outcome Variables	Primary Predictors		Covariates			Model Fit
	Technology Condition (0=VC, 1=VR)	Cognitive Status (0=MCI, 1=ADRD)	Age	Gender (0=M, 1=F)	Chronic Health	Variance explained
	β	β	β	β	β	R ²
Parents						
Self-reported engagement						
Positive emotions	.10	-.14+	-.17*	.21**	-.06	.11
Negative emotions	-.14+	.05	-.02	.16*	.13+	.07
Relational connection	-.04	-.07	-.10	.16*	-.06	.05
Relational strain	-.21**	.18*	-.06	-.08	.09	.08
Learned something new	.31***	-.10	-.04	.07	.06	.12
Reminiscence	.37***	-.06	-.02	-.03	.07	.15
Shared special moments	.22**	-.06	-.09	.15*	-.05	.08
Observational- and computer-coded engagement						
Reminiscence	.41***	.05	.01	.09	.07	.19
Conversational engagement	-.03	-.16*	-.06	-.01	.04	.04
Conversational lead	.17*	-.08	-.05	-.01	.08	.05
Positive emotional engagement	-.001	-.16*	.05	.18*	.05	.06
Active emotional engagement	.17*	-.15+	-.01	.22**	-.05	.10
Kinesic engagement (human-coded)	.24**	-.17*	-.21**	.08	-.11	.15
Kinesic engagement (computer-coded)	.20**	-.07	.01	.01	.03	.05

Secondary Outcome Variables	Primary Predictors		Covariates			Model Fit
	Technology Condition (0=VC, 1=VR)	Cognitive Status (0=MCI, 1=ADRD)	Age	Gender (0=M, 1=F)	Chronic Health	Variance explained
	β	β	β	β	β	R ²
Adult children						
Self-reported engagement						
Positive emotions	.20**	-.11	.22**	.08	–	.10
Negative emotions	-.01	.14+	-.05	.10	–	.03
Relational connection	-.09	-.15+	.13+	.09	–	.05
Relational strain	-.06	.09	-.08	.03	–	.02
Learned something new	.30***	-.17*	.17*	-.03	–	.14
Reminiscence	.23**	-.06	.08	-.06	–	.07
Shared special moments	.19*	-.11	.15+	.10	–	.07
Observationally-coded engagement						
Conversational engagement	-.10	-.03	.18*	.11	–	.06
Conversational lead	-.24**	.12	.18*	.08	–	.12
Reminiscence	.38***	.14+	.03	.02	–	.16

Note. $n = 173$ to 175 . VR = Virtual reality. VC = Video chat. MCI = Mild cognitive impairment. ADRD = mild to moderate Alzheimer's disease or related dementia. β = standardized regression coefficient (slope). A parallel series of models tested the Technology Condition $\times$ Cognitive Status interaction; no significant interaction effects were found. + $p < .10$, * $p < .05$, ** $p \leq .01$, *** $p \leq .001$.