

Supplemental materials for:

Gold KJ, Dobson ML, Sen A. "Three Good Things" digital intervention among health care workers: a randomized controlled trial. *Ann Fam Med*. 2023;21(3):220-226.

Supplemental Table 1. Changes in Well-Being Over Time For Group A (Intervention, N = 116) and Group B (Wait-List Control, N = 107), Controlling For Gender, Age, and Role

Measure	Group	Mean Changes in Scores Over Time			Interaction p-value (group A vs. B over time)
		Month 0 to Month 1 (Mean, 95% CI)	Month 1 to Month 3 (Mean, 95% CI)	Month 0 to Month 3 (Mean, 95% CI)	
PHQ	Group A	-0.50 (-1.06, 0.06)	0.27 (-0.31, 0.86)	-0.23 (-0.79, 0.34)	0.75
	Group B	-0.34 (-0.89, 0.20)	-0.04 (-0.61, 0.53)	-0.38 (-0.95, 0.19)	
PANAS-SF	Group A	2.18 (0.86, 3.50)*	-1.40 (-2.77, -0.03)*	0.78 (-0.56, 2.12)	0.03*
	Group B	0.25 (-1.07, 1.57)	1.05 (-0.31, 2.42)	1.30 (-0.03, 2.64)	
GRAT	Group A	0.43 (-0.03, 0.89)	-0.44 (-0.92, 0.04)	-0.01 (-0.47, 0.46)	0.59
	Group B	0.12 (-0.34, 0.57)	-0.39 (-0.86, 0.07)	-0.28 (-0.75, 0.19)	
SAT	Group A	-0.60 (-1.31, 0.12)	0.32 (-0.41, 1.05)	-0.28 (-1.0, 0.45)	0.97
	Group B	-0.49 (-1.19, 0.21)	0.20 (-0.53, 0.92)	-0.29 (-1.01, 0.43)	

PHQ: Depression: Lower is less depression (range 0-27)

PANAS-SF: Positive/Negative Affect: Higher is more positive (range 10-50)

GRAT: Gratitude: Higher is more gratitude (range 3-15)

SAT: Satisfaction with Life: Higher is more satisfaction (range 5-35)

Differences are calculated as (values at later time – values at earlier time)

*Statistically significant at 0.05 level

Supplemental Table 2. Linear Mixed Model Showing Overall Effects By Role and Gender, Age, and Time

Table 2a: Overall effects by role and gender (mean, standard error)

Variables		Outcomes Mean (SE)			
		PHQ-9	PANAS-SF	GRAT	SAT
Role	Administrative	4.18 (0.87)	33.20 (1.39)	11.73 (0.46)	13.79 (1.05)
	Clinical	4.53 (0.69)	30.73 (1.09)	10.62 (0.36)	14.57 (0.81)
	Faculty	3.38 (0.55)	33.68 (0.88)	11.68 (0.29)	10.94 (0.66)
p-value	Admin. vs Clinical	0.69	0.09	0.02*	0.46
	Admin vs Faculty	0.39	0.69	0.94	0.01*
	Clinical vs. Faculty	0.13	0.01*	0.008*	<0.001*
Gender	Male	3.67 (0.96)	33.09 (1.54)	11.20 (0.51)	12.27 (1.15)
	Female	4.39 (0.36)	31.90 (0.57)	11.48 (0.19)	13.93 (0.43)
p-value	Male vs. Female	0.48	0.46	0.60	0.17

PHQ: Depression: Lower is less depression (range 0-27)

PANAS-SF: Positive/Negative Affect: Higher is more positive (range 10-50)

GRAT: Gratitude: Higher is more gratitude (range 3-15)

SAT: Satisfaction with Life: Higher is more satisfaction (range 5-35)

*Statistically significant at 0.05 level

Table 2b: PHQ-9 Depression outcomes over time by role, gender, and age (mean, standard error)

Variables		Time			p-values		
		Baseline	Early	Late	Base vs Early	Base vs Late	Early vs Late
Role	Administrative	4.80 (0.93)	3.97 (0.94)	3.76 (0.95)	0.16	0.08	0.74
	Clinical	5.05 (0.72)	4.17 (0.74)	4.35 (0.74)	0.06	0.13	0.70
	Faculty	3.84 (0.59)	2.91 (0.60)	3.39 (0.60)	0.013*	0.22	0.21
Gender	Male	4.57 (1.02)	3.38 (1.05)	3.05 (1.04)	0.07	0.012*	0.62
	Female	4.55 (0.38)	3.99 (0.39)	4.61 (0.39)	0.02*	0.81	0.01*
Time	---	4.56 (0.55)	3.68 (0.56)	3.83 (0.56)	0.012*	0.035*	0.68

Age is statistically significantly associated with PHQ-9 (p-value = 0.018), with each year increase in age shown to be associated with 0.07 decrease in PHQ-9.

*Statistically significant at 0.05 level

Table 2c: PANAS-SF (Positive Affect) outcomes over time by role, gender, and age (mean, standard error)

Variables		Time			p-values		
		Baseline	Early	Late	Base vs Early	Base vs Late	Early vs Late
Role	Administrative	32.23 (1.60)	34.78 (1.68)	32.28 (1.69)	0.10	0.97	0.11
	Clinical	29.99 (1.25)	32.50 (1.33)	29.66 (1.32)	0.04*	0.78	0.02*
	Faculty	33.54 (1.02)	34.08 (1.07)	33.43 (1.05)	0.58	0.90	0.51
Gender	Male	32.83 (1.76)	34.43 (1.88)	32.013 (1.4)	0.35	0.63	0.17
	Female	31.01 (0.66)	33.14 (0.68)	31.55 (0.69)	0.001*	0.39	0.02*
Time	---	31.92 (0.95)	33.79 (1.0)	31.79 (0.99)	0.04*	0.89	0.04*

Age is statistically significantly associated with PANAS-SF (p-value = 0.008), with each year increase in age shown to be associated with 0.124 unit increase in the PANAS-SF score.

*Statistically significant at 0.05 level

Table 2d: GRAT (Gratitude) outcomes over time by role, gender, and age (mean, standard error)

Variables		Time			p-values		
		Baseline	Early	Late	Base vs Early	Base vs Late	Early vs Late
Role	Administrative	11.33 (0.52)	12.27 (0.54)	11.54 (0.54)	0.05	0.67	0.13
	Clinical	10.35 (0.41)	11.06 (0.43)	10.45 (0.43)	0.06	0.77	0.11
	Faculty	11.43 (0.33)	11.94 (0.34)	11.66 (0.34)	0.10	0.44	0.38
Gender	Male	10.91 (0.57)	11.64 (0.60)	11.04 (0.60)	0.16	0.80	0.26
	Female	11.17 (0.21)	11.87 (0.22)	11.40 (0.22)	<0.001*	0.24	0.02
Time	---	11.04 (0.31)	11.76 (0.32)	11.22 (0.32)	0.02*	0.52	0.06

Age is borderline significantly associated with GRAT (p-value = 0.046), with each year increase in age shown to be associated with 0.03 unit increase in the GRAT score.

*Statistically significant at 0.05 level

Table 2e: SAT (Satisfaction with Life) outcomes over time by role, gender, and age (mean, standard error)

Variables		Time			p-values		
		Baseline	Early	Late	Base vs Early	Base vs Late	Early vs Late
Role	Administrative	13.99 (1.11)	13.94 (1.13)	12.79 (1.13)	0.94	0.12	0.14
	Clinical	15.22 (0.87)	14.10 (0.89)	14.73 (0.89)	0.07	0.42	0.31
	Faculty	11.04 (0.70)	10.75 (0.72)	10.95 (0.71)	0.55	0.86	0.68
Gender	Male	12.62 (1.22)	12.16 (1.26)	12.00 (1.25)	0.60	0.47	0.85
	Female	14.22 (0.45)	13.69 (0.46)	13.65 (0.46)	0.10	0.07	0.88
Time	---	13.42 (0.66)	12.93 (0.68)	12.82 (0.67)	0.29	0.19	0.82

Age is significantly associated with SAT (p-value = 0.029), with each year increase in age shown to be associated with 0.08 unit decrease in the SAT score.

