The Effects of Self-Affirmation on Memory

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Introduction

- Harris, Harris and Miles (2017)
- Study showing working memory is improved with self-affirmations based on personal values
- The current study aimed to see if generalized self-affirmations would have immediate effect on working memory.

Introduction

- Wood, Perunovic, & Lee (2009)
- Showed that general affirmations may have a negative effect on participants with low self-esteem and/or if they do not believe the affirmations they are reading.
- This study tracked the participants belief in each affirmation to see if this effect could be confirmed as a secondary question.

Introduction

- Hypotheses:

  Null Hypothesis: There will be no difference between scores after positive and negative self statements

  Research Hypothesis: Subjects will do better on memory test after positive self-statements

- Variables

  IV: Self-affirmations – Positive or Negative

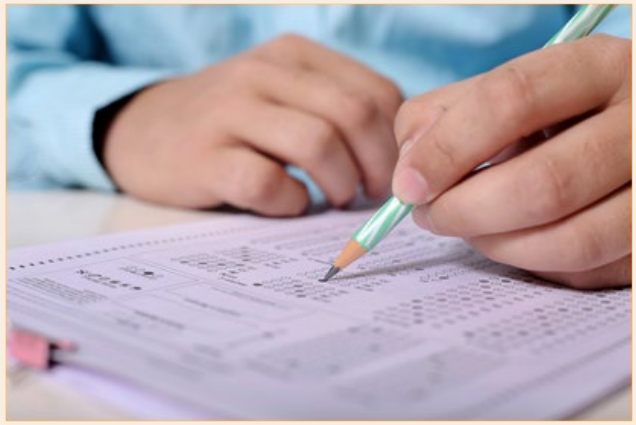
  DV: Test Scores – Memory word test

  Secondary interest: Would those who aligned with negative affirmations be more effected by the negative affirmations or vice versa?

METHODS: Participants

- 26 participants
- 7 Males
- 19 Females
- Age range from 18 to 49 / Average age 30 (outlier was removed)
- Diverse ethnicities 50% Caucasian, 27% Latino 11% Asian, 11% All Other
- Undergraduates from Orange Coast and friends and family

METHODS: Procedures



1) Consent Form
2) Set of Affirmations (alternating order)
3) 1 min to memorize set of words
4) 2 mins to recall words
5) Repeat with alternate affirmations and set of words
6) Demographic and affirmation questionnaire
7) Debrief

METHODS: Materials

- List of Positive Affirmations
- List of Negative Affirmations
- 2 Memory tests – 16 words each
- Demographics Questionnaire
- Timer

Positive Affirmations

- I am good at taking tests
- I have a strong memory
- I stay calm and focused

- I can do anything I set my mind to
- I feel good about taking a memory test

Negative Affirmations

- Tests are difficult for me
- I can’t remember anything
- I can’t do anything right
- I can’t stay calm and focused
- I feel worried about taking a memory test

Memorize these words

BELL
YEARS
SAINT
ALGEBRA
MARIA
GENEROUS
WALLS
BRAND
WOMAN
PAINT
SURFBOARD
GUESS
WORRY
MAGIC
YOUTH
CARPET

Materials: Questionnaire

Please rate how much you agree with the following statements, 1 being strongly disagree and 10 being strongly agree *(Circle one)***:**

I am good at taking tests

1 2 3 4 5 6 7 8 9 10

I have a strong memory

1 2 3 4 5 6 7 8 9 10

I stay calm and focused

1 2 3 4 5 6 7 8 9 10

Tests are difficult for me

1 2 3 4 5 6 7 8 9 10

I can't remember anything

1 2 3 4 5 6 7 8 9 10

I can't do anything right

1 2 3 4 5 6 7 8 9 10

Results

- A Paired Samples T-Test was used
- NO SIGNIFICANT RESULTS
- Sig. (2-Tailed)= **.687**
- Accept the Null Hypothesis
- Mean test scores: Positive: 9.40 Negative: 9.60
- Ran a correlation test:
  - Those who said they had strong memory scored higher
  - Did not find those that aligned with negative affirmations were more effected by negative affirmations

Statistical Analysis: Paired

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	DV1- score on positve	9.40	25	2.566	.513
	DV2- Score on negative	9.60	25	2.566	.513

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	DV1- score on positve - DV2- Score on negative	-.200	2.449	.490	-1.211	.811	-.408	24	.687

Statistical Analysis

Correlations

		DV1- score on positve	DV2- Score on negative	Age	Self-Esteem
DV1- score on positve	Pearson Correlation	1	.544**	-.067	.125
	Sig. (2-tailed)		.005	.751	.553
	N	25	25	25	25
DV2- Score on negative	Pearson Correlation	.544**	1	-.329	.067
	Sig. (2-tailed)	.005		.109	.750
	N	25	25	25	25
Age	Pearson Correlation	-.067	-.329	1	-.153
	Sig. (2-tailed)	.751	.109		.465
	N	25	25	25	25
Self-Esteem	Pearson Correlation	.125	.067	-.153	1
	Sig. (2-tailed)	.553	.750	.465	
	N	25	25	25	25
I have a strong memory	Pearson Correlation	.621**	.606**	-.249	.432*
	Sig. (2-tailed)	.001	.001	.230	.031
	N	25	25	25	25
I can't remember anything	Pearson Correlation	-.394	-.090	.074	-.083
	Sig. (2-tailed)	.051	.669	.727	.694
	N	25	25	25	25
How often use affirmations	Pearson Correlation	.066	.192	.420	-.243
	Sig. (2-tailed)	.814	.493	.119	.384
	N	15	15	15	15
Likely to respond to affirmations	Pearson Correlation	-.054	.168	-.333	-.285
	Sig. (2-tailed)	.843	.533	.207	.284
	N	16	16	16	16
Test Order	Pearson Correlation	.006	-.166	.574**	.117
	Sig. (2-tailed)	.976	.429	.003	.577
	N	25	25	25	25

Statistical Analysis

Group Statistics

	Test Order	N	Mean	Std. Deviation	Std. Error Mean
DV1- score on positve	Positive First	13	9.38	2.599	.721
	Positive second	12	9.42	2.644	.763
DV2- Score on negative	Positive First	13	10.00	2.517	.698
	Positive second	12	9.17	2.657	.767

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
DV1- score on positve	Equal variances assumed	.014	.908	-.031	23	.976	-.032	1.049	-2.203	2.138
	Equal variances not assumed			-.031	22.769	.976	-.032	1.050	-2.205	2.141
DV2- Score on negative	Equal variances assumed	.338	.567	.805	23	.429	.833	1.035	-1.307	2.974
	Equal variances not assumed			.804	22.572	.430	.833	1.037	-1.314	2.981

Discussion

- Subject-expectancy effects: Subjects reported counteracting negative statements by "blocking" affirmations or trying harder
- Future research may be best with implicit affirmations vs. explicitly stating affirmations.
- Everyone scored a little better on the 2nd test regardless of order indicating mild practice effects – not significant
- Weaknesses:

  Test was long because it was repeated measures design

  Questionnaire scale was confusing to some participants

  Could have used a better test to rate subjects self-esteem

Questions?