

Measuring Subjective Health and Life Satisfaction with U.S. Hispanics*

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Background – 1

- Subjective health and well-being
 - Good health
 - Happiness
 - Life satisfaction

- Measurement of subjective health and well-being
 - Single item or multi-item scales
 - Often with ordinal response scales
 - e.g., Strongly agree—Strongly disagree
 - Excellent—Poor
 - Completely satisfied—Not satisfied at all

Background – 2

Focusing on U.S. Hispanics,

- Translation of response scales: “Excellent”, “Fair”
- Acquiescent response style: “Agree”
- Extreme response style: “Strongly”, “Completely”

→ Measurement (non)comparability

Data – 1

- Similar experiments implemented in three surveys
- Web survey 1
 - Convenient sample of Spanish-speaking US Hispanics
 - N=1,238
 - Spanish interviews: 1,238 (100%)
 - Male: 547 (45%); <HS educ: 122 (10%); Av. Age: 41.2 yrs
- Telephone survey
 - Quota sample of US Hispanics with an oversample of persons with low income/education; Screened in acquiescers
 - N=913
 - Spanish interviews: 851 (93%)
 - Male: 177 (20%); <HS educ: 463 (52%); Av. Age: 64.5 yrs

Data – 2

- Web survey 3
 - Web panel sample of US Hispanics, Blacks and Whites balanced by age-sex-education quota
 - N=3,146
 - Hispanics: 1,638; Blacks: 749; White: 759
 - Spanish interview: 889 (28%)
 - Male: 1511 (48%); <HS educ: 171 (5%); Av. Age: 46.8 yrs
 - Wide range of covariates available

Experiment 1: Self-rated health

- Would you say that in general your health is excellent, very good, good, fair, or poor?
- ¿Diría que, en general, su salud es excelente, muy buena, buena, regular, o mala?
- Well known worse health reporting by Hispanics
- Experiment: Spanish translation of “Fair”
 - Control
 - Excelente
 - Muy Buena
 - Buena
 - Regular
 - Mala
 - Experiment
 - Excelente
 - Muy Buena
 - Buena
 - **Pasable**
 - Mala

Experiment 1: SRH

Analysis

- By experimental condition, compare
 - Response distribution
 - Combined Poor/Fair health through χ^2 test
 - Correlates of SRH through t -test
 - Spanish interviews only

Results – Experiment 1: SRH

	Web Survey 1	
	Regular	Pasable
<i>n</i>	612	623
Poor (%)	2.0	1.6
Fair (%)	15.8	10.6
Good (%)	32.0	35.5
Very Good (%)	30.7	33.2
Excellent (%)	19.4	19.1
Poor/Fair (%)	17.8	12.2
	$\chi^2=7.6$ ($p=0.006$)	

Results – Experiment 1: SRH

	Web Survey 1		Telephone Survey	
	Regular	Pasable	Regular	Pasable
<i>n</i>	612	623	417	429
Poor (%)	2.0	1.6	8.9	12.4
Fair (%)	15.8	10.6	51.3	38.0
Good (%)	32.0	35.5	24.5	33.1
Very Good (%)	30.7	33.2	7.4	8.9
Excellent (%)	19.4	19.1	7.9	7.7
Poor/Fair (%)	17.8	12.2	60.2	50.3
	$\chi^2=7.6$ ($p=0.006$)		$\chi^2=8.3$ ($p=0.004$)	

Results – Experiment 1: SRH

	Web Survey 1		Telephone Survey		Web Survey 2	
	Regular	Pasable	Regular	Pasable	Regular	Pasable
<i>n</i>	612	623	417	429	448	442
Poor (%)	2.0	1.6	8.9	12.4	3.8	4.1
Fair (%)	15.8	10.6	51.3	38.0	20.8	17.2
Good (%)	32.0	35.5	24.5	33.1	32.7	35.5
Very Good (%)	30.7	33.2	7.4	8.9	30.0	32.1
Excellent (%)	19.4	19.1	7.9	7.7	12.7	11.1
Poor/Fair (%)	17.8	12.2	60.2	50.3	24.6	21.3
	$\chi^2=7.6$ ($p=0.006$)		$\chi^2=8.3$ ($p=0.004$)		$\chi^2=1.2$ ($p=0.27$)	

Results – Experiment 1: SRH

Correlates of SRH	Web Survey 2			
	Regular		Pasable	
	Fair, Poor	Good, Very Good, Excellent	Fair, Poor	Good, Very Good, Excellent
<i>n</i>	110	338	94	348
# Chronic conditions (avg. of 17 conditions)	2.20	1.14	2.56	1.28
Satisfaction with life score (avg. of 5 7-point items)*	4.22	5.00	3.79	5.05
Age (in yrs)	45.5	41.5	49.3	42.9

 Significantly different at $p < 0.05$

* Significant difference in differences at $p < 0.05$

Experiment 2: Satisfaction with life

- Ed Diener's satisfaction with life scale with 5 items
 1. In most ways my life is close to my ideal.
 2. The conditions of my life are excellent.
 3. I am satisfied with my life.
 4. So far I have gotten the important things I want in life.
 5. If I could live my life over, I would change almost nothing.
 - Response scale: Strongly agree (7)—Strongly disagree (1)
- All items written in positive direction
 - Subject to acquiescent and extreme response styles
 - Difficult to ascertain the true life satisfaction apart from the effect of response styles

Experiment 2: SWL

- All positive (Control)
 - In most ways my life is close to my ideal.
 - The conditions of my life are excellent.
 - I am satisfied with my life.
 - So far I have gotten the important things I want in life.
 - If I could live my life over, I would change almost nothing.
- Balanced* (Experiment)
 - In most ways my life is **far from my ideal.**
 - The conditions of my life are excellent.
 - I am satisfied with my life.
 - So far I have gotten the important things I want in life.
 - If I could live my life over, **I would change a lot of things.**

* 2-item balanced in Web survey 1 and Telephone survey; 1- and 2-item balanced in Web survey 2.

Experiment 2: SWL

Analysis

- By experimental condition, compare
 - Mean score (Range: 1–7) through t -test
 - % Extremely satisfied (Mean score ≥ 6) through χ^2 test
 - Association between satisfaction with life mean score and well-known covariates (education and income) in a linear model controlling for age and gender
 - Hispanics only

Results – Experiment 2: SWL

	Web Survey 1	
	Spanish	
	Positive	Balanced
<i>n</i>	613	619
Overall (Mean score)	5.02	4.77
Extremely satisfied (%)	21.0%	12.8%



Significantly different at $p < 0.05$

Results – Experiment 2: SWL

	Web Survey 1		Telephone Survey			
	Spanish		Spanish		English	
	Positive	Balanced	Positive	Balanced	Positive	Balanced
<i>n</i>	613	619	418	425	37	24
Overall (Mean score)	5.02	4.77	5.92	4.81	5.35	4.54
Extremely satisfied (%)	21.0%	12.8%	56.2%	8.7%	29.7%	6.3%



Significantly different at $p < 0.05$

Results – Experiment 2: SWL

	Web Survey 2					
	Spanish			English		
	Positive	1-Bal.	2-Bal.	Positive	1-Bal.	2-Bal.
<i>n</i>	225	445	220	175	370	205
Overall (Mean score)	5.00	4.80	4.58	4.43	4.49	4.58
Extremely satisfied (%)	37.3%	16.6%	8.6%	24.6%	7.8%	1.5%



Significantly different at $p < 0.05$

Results – Experiment 2: SWL

	Web Survey 1 (Spanish)		Telephone Survey (Spanish)	
	Positive	Balanced	Positive	Balanced
	Mean	Mean	Mean	Mean
<i>n</i>	613	619	418	425
Overall	5.02	4.77	5.92	4.81
Gender				
Male	5.11	4.80	5.69	4.96
Female	4.96	4.74	5.96	4.76
Education				
< High school	5.07	4.37	6.08	4.71
≥ High school	5.01	4.81	5.76	4.91



Significantly different at $p < 0.05$

Results – Experiment 2: SWL

	Web Survey 2					
	Spanish			English		
	Positive	1-Bal	2-Bal	Positive	1-Bal	2-Bal
<i>n</i>	225	445	220	175	370	205
Overall	5.00	4.79	4.58	4.42	4.49	4.58
Gender						
Male	5.15	4.56	4.65	4.55	4.37	4.55
Female	4.84	4.76	4.53	4.31	4.44	4.66
Education						
< High sch	4.81	4.65	3.94	3.97	3.99	4.66
≥ High sch	5.03	4.81	4.62	4.45	4.27	4.61

 Significantly different at $p < 0.05$

Results – Experiment 2: SWL Assoc.

	Web Survey 1 (Spanish)		Telephone Survey (Spanish)	
	Positive	Balanced	Positive	Balanced
Age (yrs)	-0.00	-0.01*	0.01#	0.01*
Gender				
Male vs. Female	-0.07	-0.00	0.11	0.05
Education				
≥ vs. < High school	-0.09	0.39*	-0.32*	0.20#
Income				
≥ vs. < \$30K	0.26*	0.40***		
≥ vs. < \$20K			0.05	0.04
<i>R</i> ²	0.009	0.043	0.027	0.033

Significant at $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Results – Experiment 2: SWL Assoc.

	Web Survey 2					
	Spanish			English		
	Positive	1-Bal	2-Bal	Positive	1-Bal	2-Bal
Age (yrs)	0.00	0.00	0.00	0.02**	0.01 [#]	0.01
Gender						
Male vs. Female	-0.27	-0.09	-0.17	0.28	0.19	-0.14
Education						
≥ vs. < High school	0.18	0.15	0.67*	0.15	0.17	-0.23
Income						
≥ vs. < \$50K	-0.38	0.02	0.40*	0.09	-0.09	0.10
<i>R</i> ²	<i>0.023</i>	<i>0.003</i>	<i>0.024</i>	<i>0.046</i>	<i>0.012</i>	<i>0.037</i>

Significant at $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

What did we learn?

- Experimental conditions produce different and more reasonable results than current practices
- SRH response scale translation
 - “Pasable” for “Fair” produces better health than “Regular”
 - Some evidence for better association with known correlates
- SWL item scale direction
 - Balanced scale produced logical results
 - Direction mattered more for those with low education (not shown)
- Results replicated in three surveys of different modes and very different samples

THANK YOU!

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