

# The Impact of Job Satisfaction on Well-being

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The findings and conclusions are those of the authors and do not necessarily represent the views of NIOSH

# Objective

Examine the relationship between:

- 1) Employment and well-being
- 2) Job satisfaction (work-related well-being) and well-being

# Implications

Work place intervention studies often overlook the indirect benefits/costs from job satisfaction/dissatisfaction.

Incorporating well-being (derived) from job satisfaction will add to the comprehensiveness of future cost-benefit analyses.

# Well-being

- Broad [multidimensional concept](#) that includes subjective evaluations of life and life's purpose
- Refers to people's command over resources and how people value resources
- Well-being is defined ambiguously across disciplines and often is associated with quality of life (QoL) in economics (Sen & Stiglitz, 2010)

# Well-being

- Well-being
  - Subjective: People's perception about their QoL
  - Capabilities: People's freedom to choose among various functioning roles
  - Fair Allocation: People's diverse preferences are considered in measuring allocative fairness
- Well-being =  $f$  (Personal Characteristics; Health; Accessibility to economic, social, and political needs; and work-related well-being)

# How Well-being is measured

Subjective well-being is measured in terms of overall life satisfaction and daily hedonic experiences (Kahneman & Deaton, 2010; Deaton & Stone, 2013)

## Life satisfaction

i) **Current life evaluation**: From 0-10, 10 being the best, where would you say you personally feel you stand at this time?

ii) **Future life evaluation**: Where do you think you will stand about five years from now?

Gallup's Thriving Index: Thriving == (7-10) on current & (8-10) on future; Suffering == (0-3) on current & (0-4) on future; Struggling == all other combinations

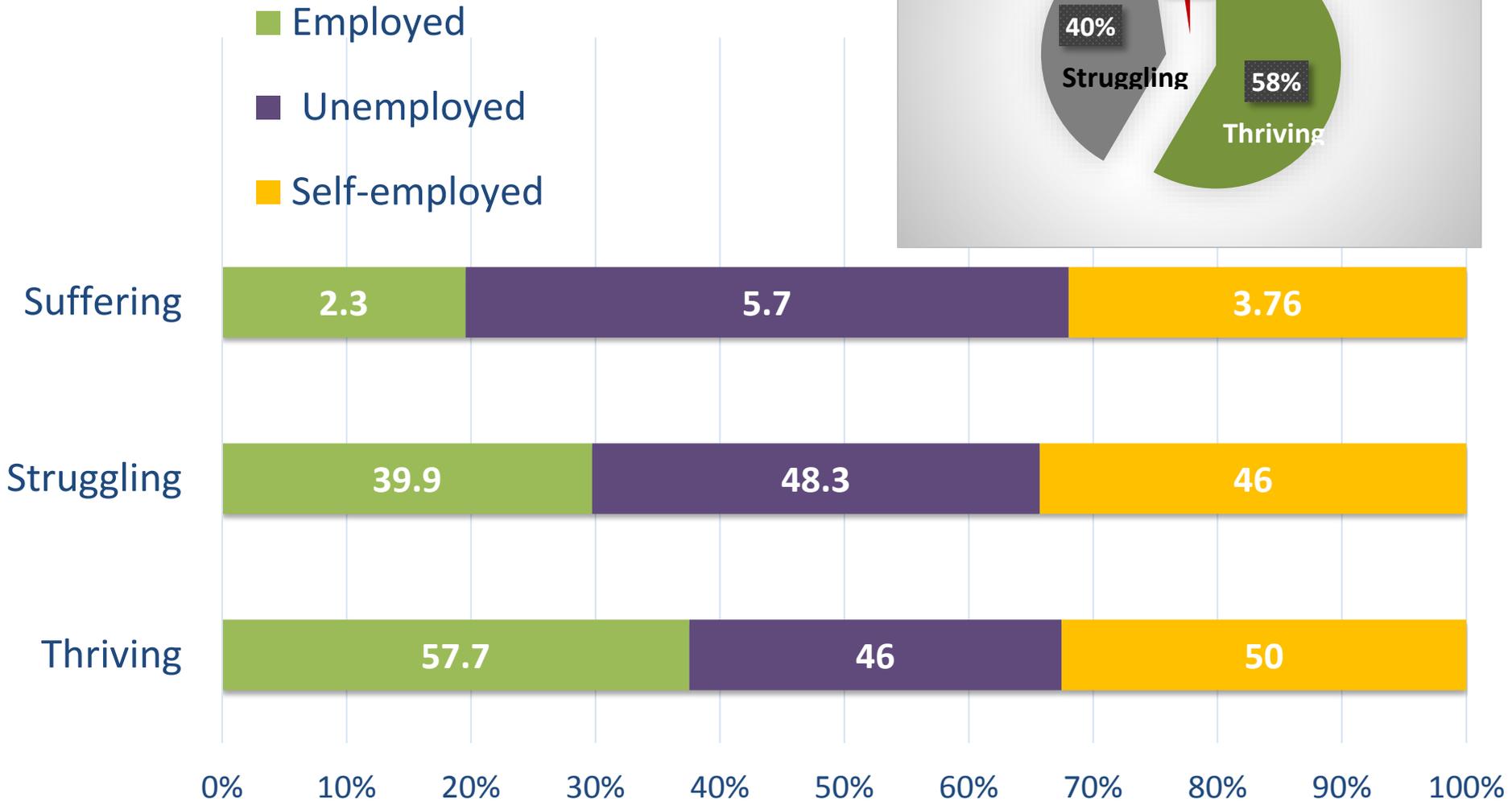
**Hedonic experiences** measured as bivariate response to

i) Did you smile or laugh a lot yesterday?

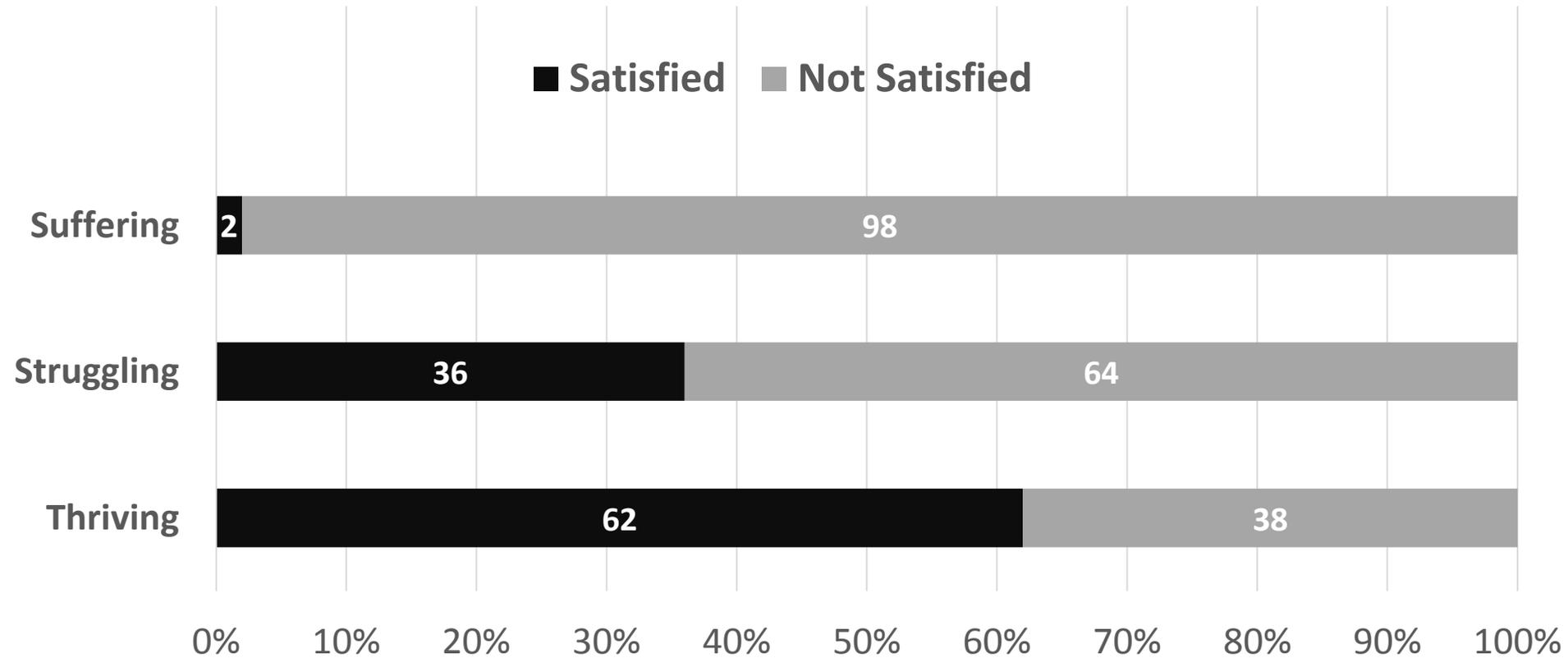
ii) Did you experience the following feelings during a lot of the day yesterday?

a) enjoyment; b) happiness; c) worry; d) sadness; e) stress; and f) anger

# Employment and Thriving



# Job Satisfaction and Thriving



# Gallup data

- Daily survey asking 1,000 U.S. adults about various political, economic, and well-being topics
- Random selection method for choosing respondents
- Two different topical questionnaires, with some shared items: half of the respondents receive the Well-being track, while the other half receive the Politics and Economy track
- Weights are provided to match data from the U.S. Census Bureau by age, gender, race, region, education, ethnicity, as well as population density of self-reported location
- We used 2013 Gallup Well-being track weighted data with a total population size of 177,132 individuals in our analysis

# Summary Statistics (sample population)

Age (mean)	53.5 (18-100)
Gender (%)	49 (male)
Monthly Household Income (%)	<3000 (25) 3000-5000 (25) 5000-10000 (25) >10000 (8)
Race (%)	White (71) Other (1) Black(9) Asian(2) Hispanic(9)
Education (%)	<HS (5) HS (19) Technical/Vocational(6) Some college(25) Two year associate degree (23) Graduate (19) Some professional (1) Post graduate (1)
Employed (%)	Employed (48) unemployed (41) self-employed (9)
Health (%)	Excellent (20) Very Good(32) Good (30) Fair (14) Poor (5)
Living Standard (%)	Satisfied (79) Not Satisfied (21)
Economic Conditions Getting Better (%)	Yes (40) Same (3) Worse (56)

# Determinants of Well-being

<b>Personal Characteristics</b>	Age, gender, race, marital status, children, education, monthly household income, labor union, BMI, overall health
<b>Behavioral Health</b>	Smoking; in past week - days with more than 30 minutes of exercise, days with 5 servings of fruits & vegetables, days of healthy eating
<b>Physical Health</b>	Health problems in last month - activity limitation, High Blood Pressure, cholesterol, diabetes, depression, heart attack, asthma, cancer, neck/back pain, knee/leg pain, other pain, other health problems; feel well rested, feel energetic; suffering from flu, cold, headache, allergies; experience of physical pain yesterday
<b>Emotional Health</b>	In previous day - treated with respect, smile/laugh, learn something, experienced -enjoyment, worry, sadness, stress, anger, or happiness
<b>Basic Accessibility to Social Needs</b>	Visited dentist, doctor in last month; health insurance status; satisfaction with current city, living area; access to water, medicine, fruits and vegetables, safe exercise place; safe walking alone; have money to buy food, shelter, healthcare
<b>Economic Condition</b>	Standard of living, financial condition
<b>Other Variable</b>	Social support, like daily activities, financial stability
<b>Work-related Well-being</b>	<b>Job satisfaction</b>

# Methodology

1. Mean life-evaluation scores were compared between the employed and the unemployed (without considering the self-employed), and also between those who were satisfied at their job and those who were not
2. Separate linear models were fitted where the dependent variables were life evaluation and hedonic well-being experiences and explanatory variable was job satisfaction; controlling for other determinants of well-being

# Results:

## Life satisfaction scores and hedonic experience prevalence (unadjusted)

Subjective Well-Being	Well-being Element	Employed			Unemployed (73,352)
		Satisfied at job (74,980)	Not satisfied at job (10,067)	Δ	
Average Life Evaluation Score (0-10)	Life Evaluation Today	7.21	5.97	1.24	6.18
	Life Evaluation Future	8.04	6.02	2.02	7.96
Hedonic well-being (proportion saying 'yes')	Happiness	0.92	0.76	0.16	0.84
	Smiling	0.87	0.71	0.16	0.79
	Enjoyment	0.89	0.68	0.21	0.8
	Sadness	0.12	0.3	-0.18	0.28
	Anger	0.88	0.71	0.17	0.8
	Worry	0.26	0.51	-0.25	0.44
	Stress	0.39	0.64	-0.25	0.51

# Results:

## Paired t test

- **Employed respondents reported higher current life evaluation as compared to unemployed respondents**
  - t statistic= -16.44; 156360 d.f. ( $H_0 = \text{mean}(\text{unemployed}) - \text{mean}(\text{employed}) = 0$ )
- **Employed respondents reported higher future life evaluation as compared to unemployed respondents**
  - t statistic= -83.35; 151011 d.f. ( $H_0 = \text{mean}(\text{unemployed}) - \text{mean}(\text{employed}) = 0$ )
- **Respondents satisfied with their jobs reported higher current life evaluation as compared to those who were unsatisfied**
  - t statistic= -70.31; 85045 d.f. ( $H_0 = \text{mean}(\text{unsatisfied}) - \text{mean}(\text{satisfied}) = 0$ )
- **Respondents satisfied with their jobs reported higher future life evaluation as compared to those who were unsatisfied**
  - t statistic= -32.51; 83792 d.f. ( $H_0 = \text{mean}(\text{not satisfied}) - \text{mean}(\text{satisfied}) = 0$ )

# Results:

## Fitted Models

- Job satisfaction is significant and positive contributor to Subjective well-being

	Life Evaluation		Smiling	Happiness	Enjoyment	Sadness	Anger	Worry	Stress
	Current	Future							
Job satisfaction	0.75	0.44	0.11	0.11	0.16	-0.11	0.12	-0.15	-0.15
t statistic	30.24	15.63	21.55	19.78	27.15	-18.51	20.75	-22.92	-22.62

# Conclusions

- ✓ Employed individuals reported higher well-being as compared to unemployed individuals
- ✓ Employees with higher levels of job satisfaction reported higher levels of well-being
- ✓ Interventions that affect job satisfaction need to incorporate the derived benefits/costs from altered well-being

# Conclusions

Income equivalent of job satisfaction

- ✓ The well-being valuation method can estimate monetary value to non-monetary goods (Fuziwara, 2013)

<http://cep.lse.ac.uk/pubs/download/dp1233.pdf>

- ✓ Welfare gain from Job Satisfaction:

$$\text{Compensating Surplus} = \text{Income}_0 - e^{\left[ \ln(\text{Income}_0) - \frac{\Delta \text{well-being}}{\Delta \text{job satisfaction}} \left/ \frac{\Delta \text{well-being}}{\Delta \text{income}} \right. \right]}$$

- ✓ Taking \$5000 as base monthly income and current life evaluation as proxy for subjective well-being the compensating surplus for job satisfaction is estimated at \$1,554 per month.