

The Role of Psychological Measures in Cash Transfer Evaluations

Ashu Handa

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Growing interest in how psychological factors affect economic decisions

- Psychological factors affect (or determine) preferences, which influences choices
- Time preference or propensity to wait for future money
 - ‘delayed gratification’ linked to self-control, addiction, wealth accumulation, executive function
- Attitudes towards risk affect investment
- Emotional state linked to behavioral choices
 - Short term: ‘hot’ and ‘cold’ states
 - Long term: depression, happiness, self-esteem, hope

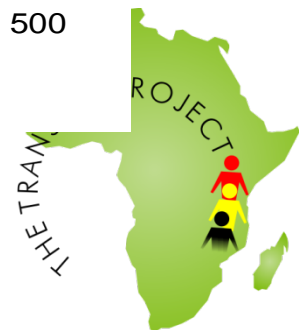
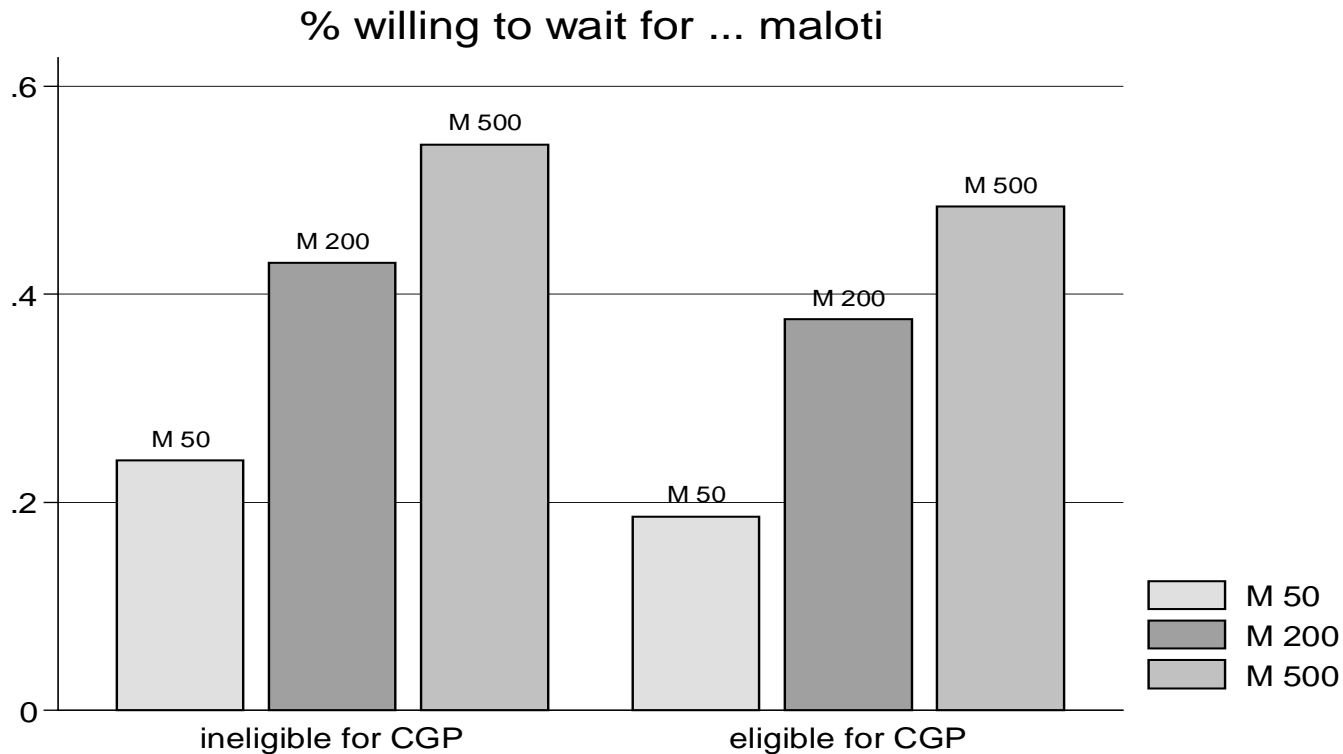


Behavioral psychology and program evaluation

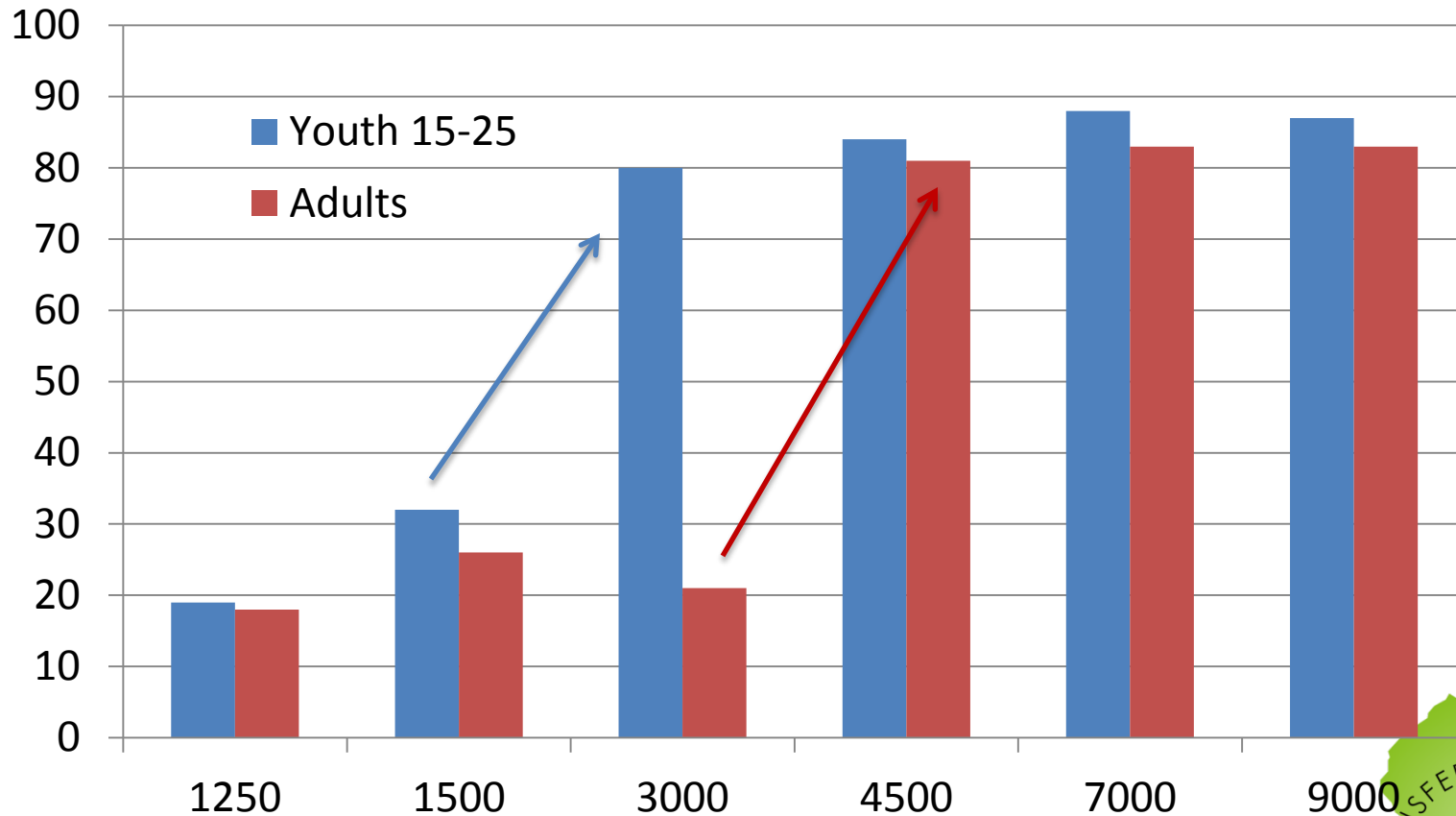
- Can hypothetical questions be measured accurately in large-scale field surveys?
- Some variables are affected by SCT (time preference, happiness) and may be mediators
- Others may be permanent (moderators)
- Some indicators may be outcomes
 - Happiness, depression



Receive 1000 Maloti now or 1000+X Maloti in one month?

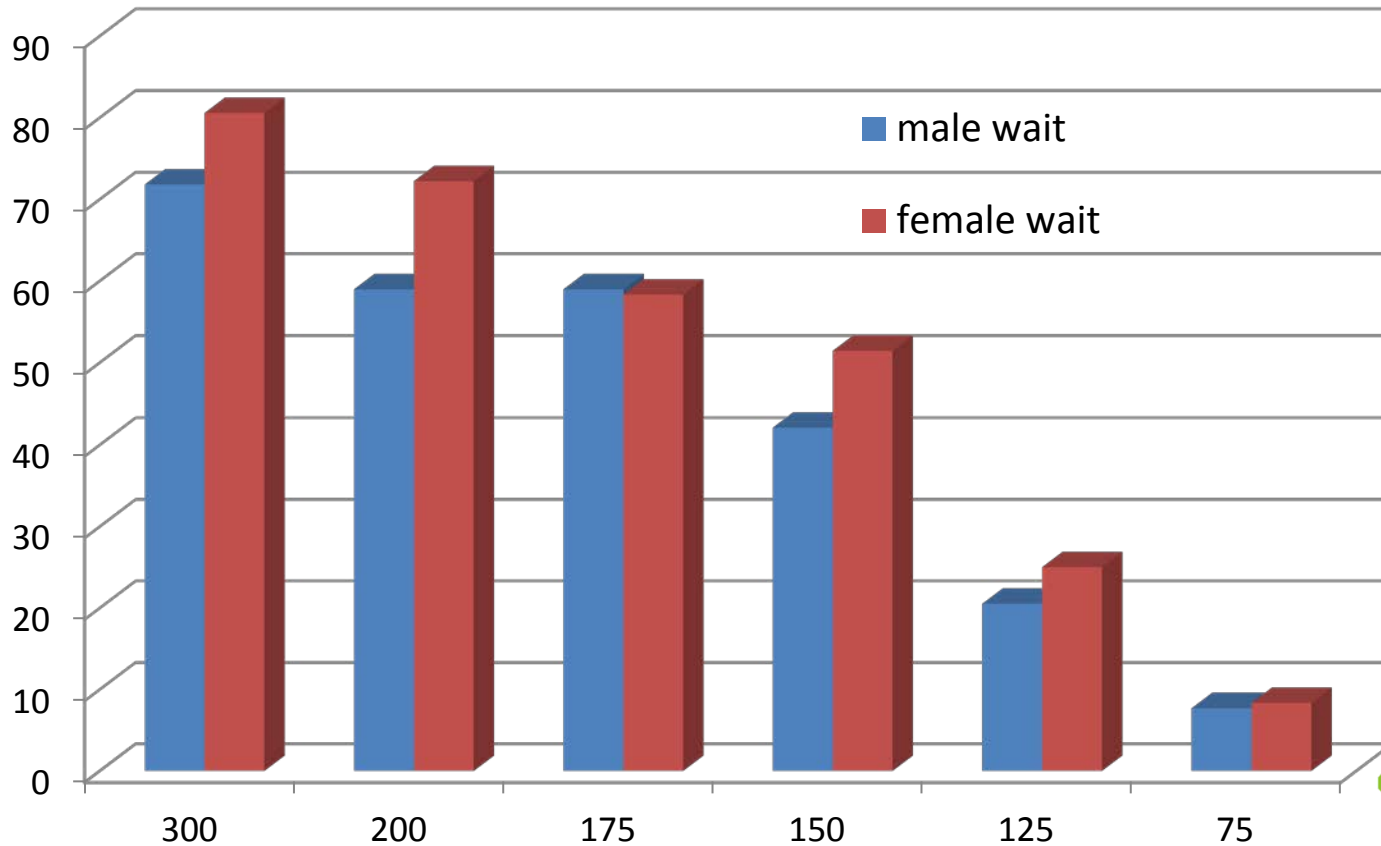


Take Ks 1500 or wait one month for... (Kenya CT-OVC)

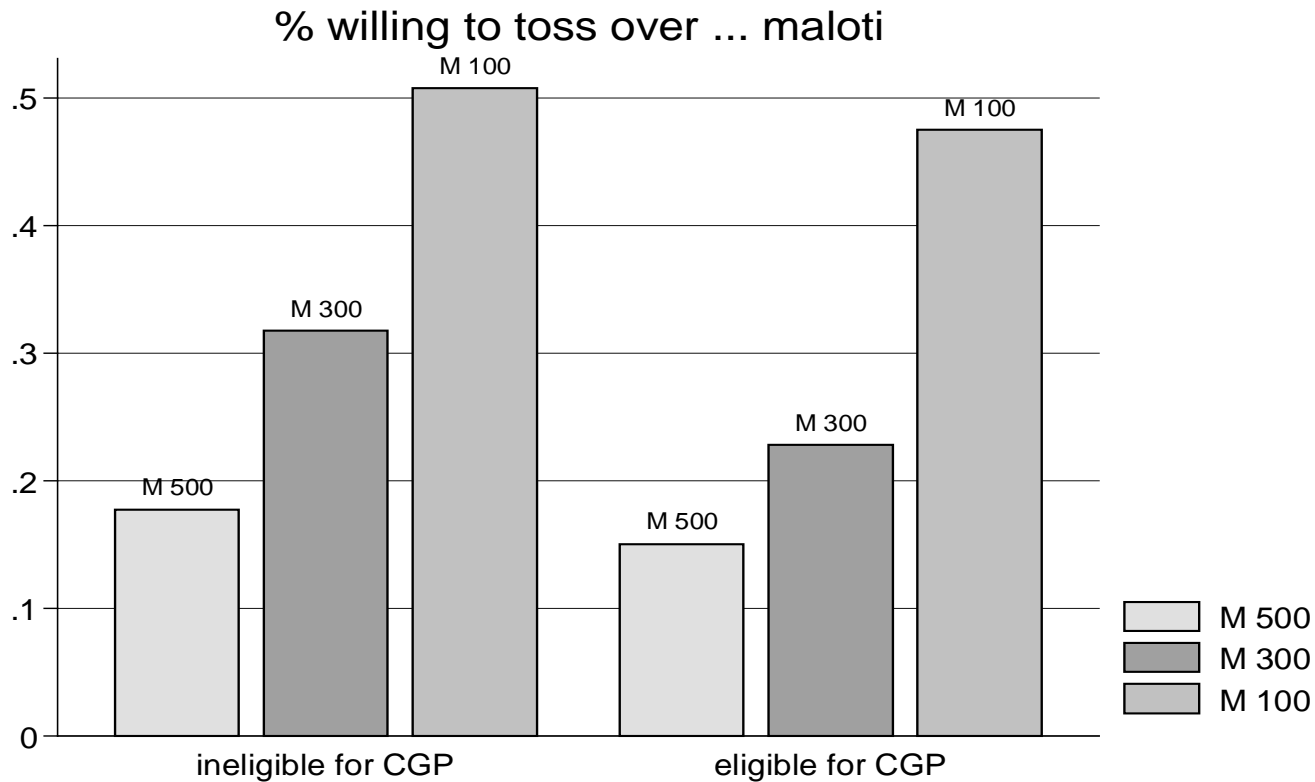


Percent willing to wait for \$'X'

ZIM HSCT enumerators

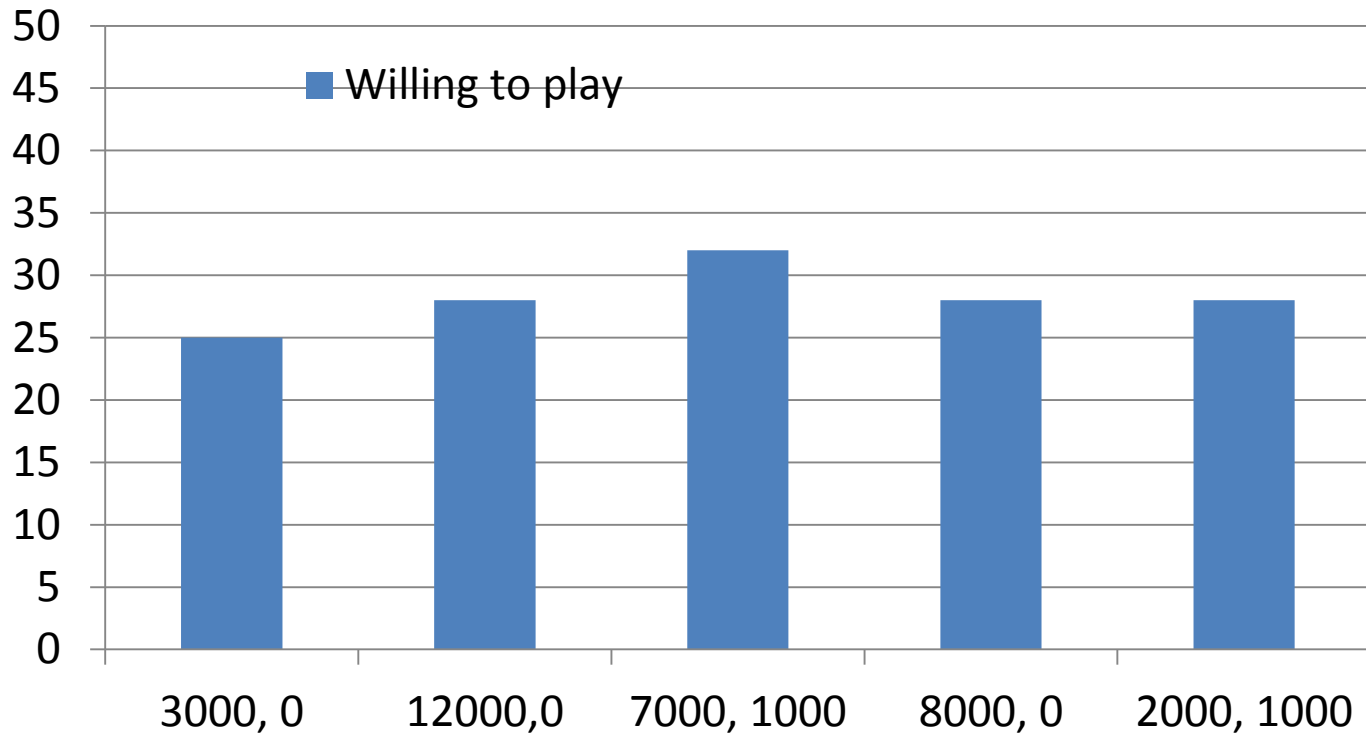


Take X or toss coin for 1000 Maloti



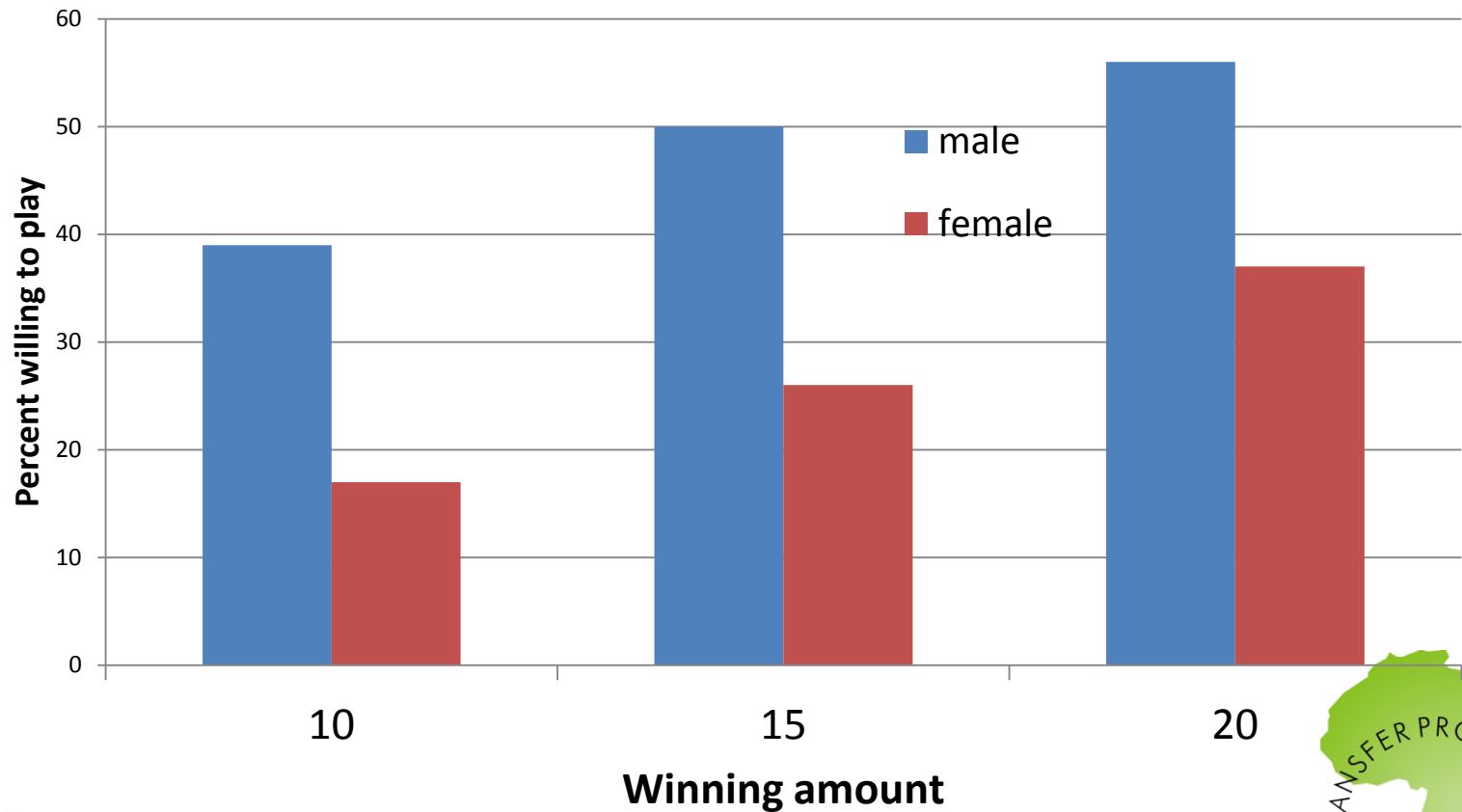
Risk aversion Kenya CT-OVC

Ks1500 for certain versus coin toss



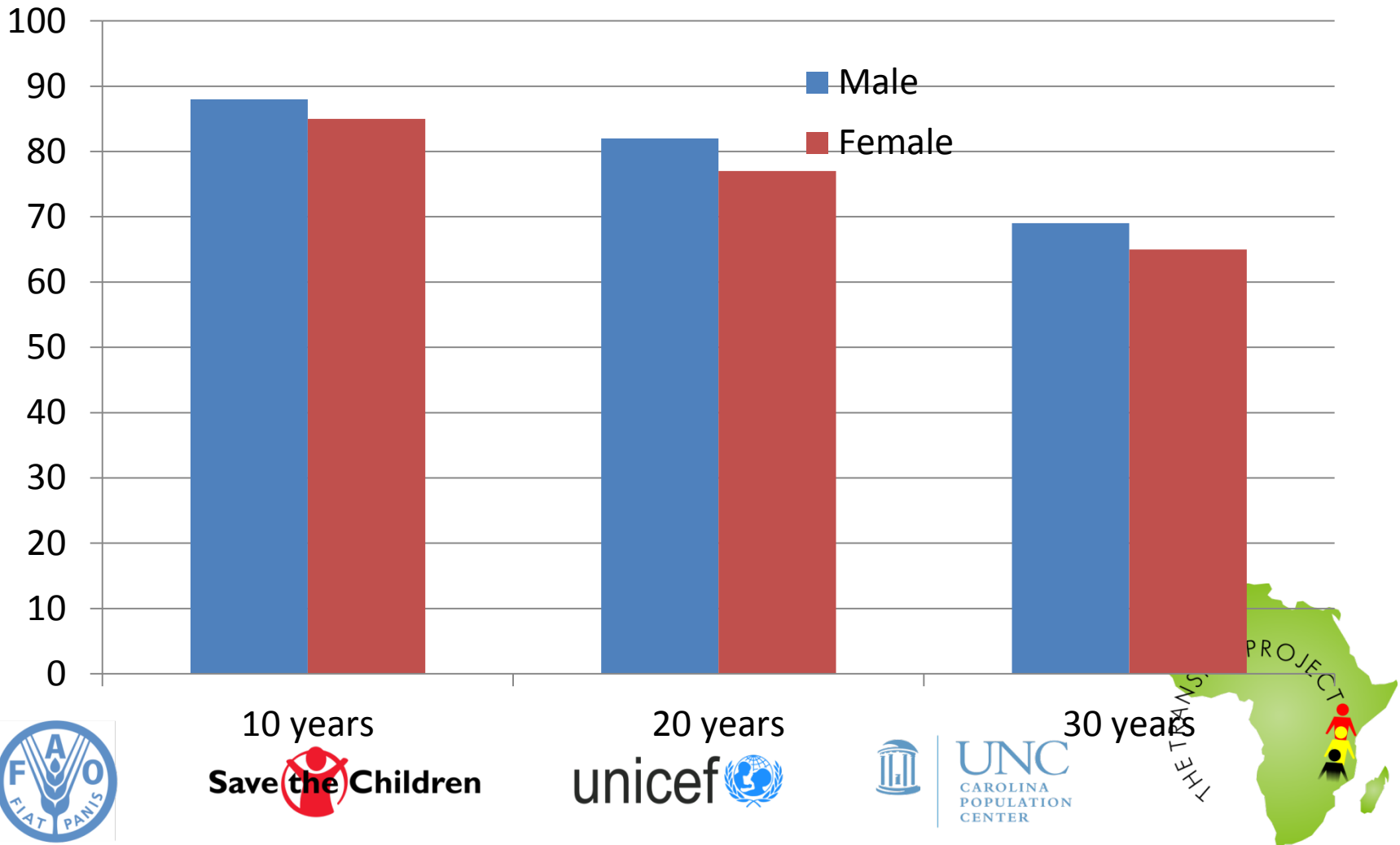
Percent willing to decline \$10 for sure and play 'coin toss'

ZIM HSCT enumerators



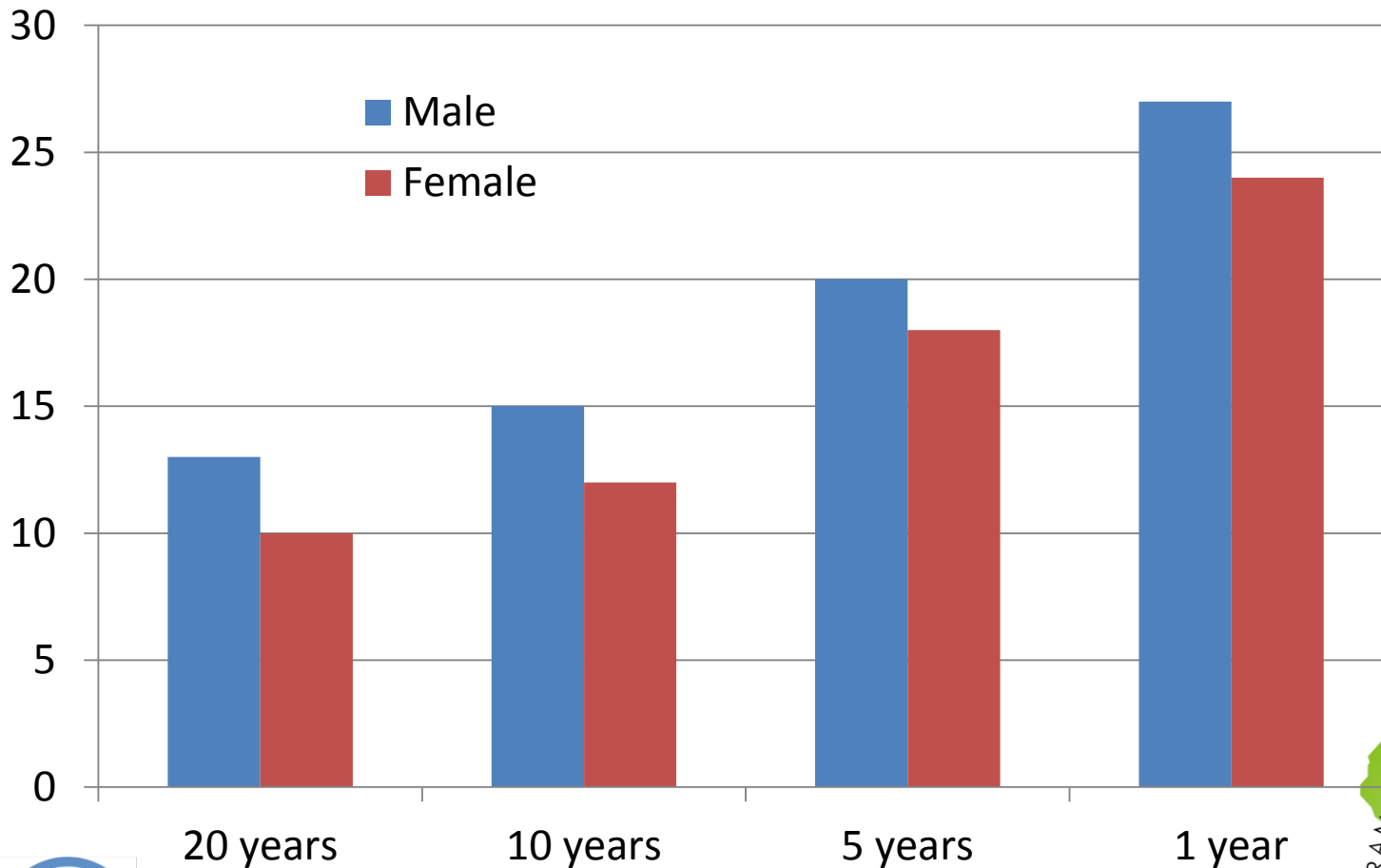
Strongly agree will be alive in...

Kenya CT-OVC Young Adults 15-25

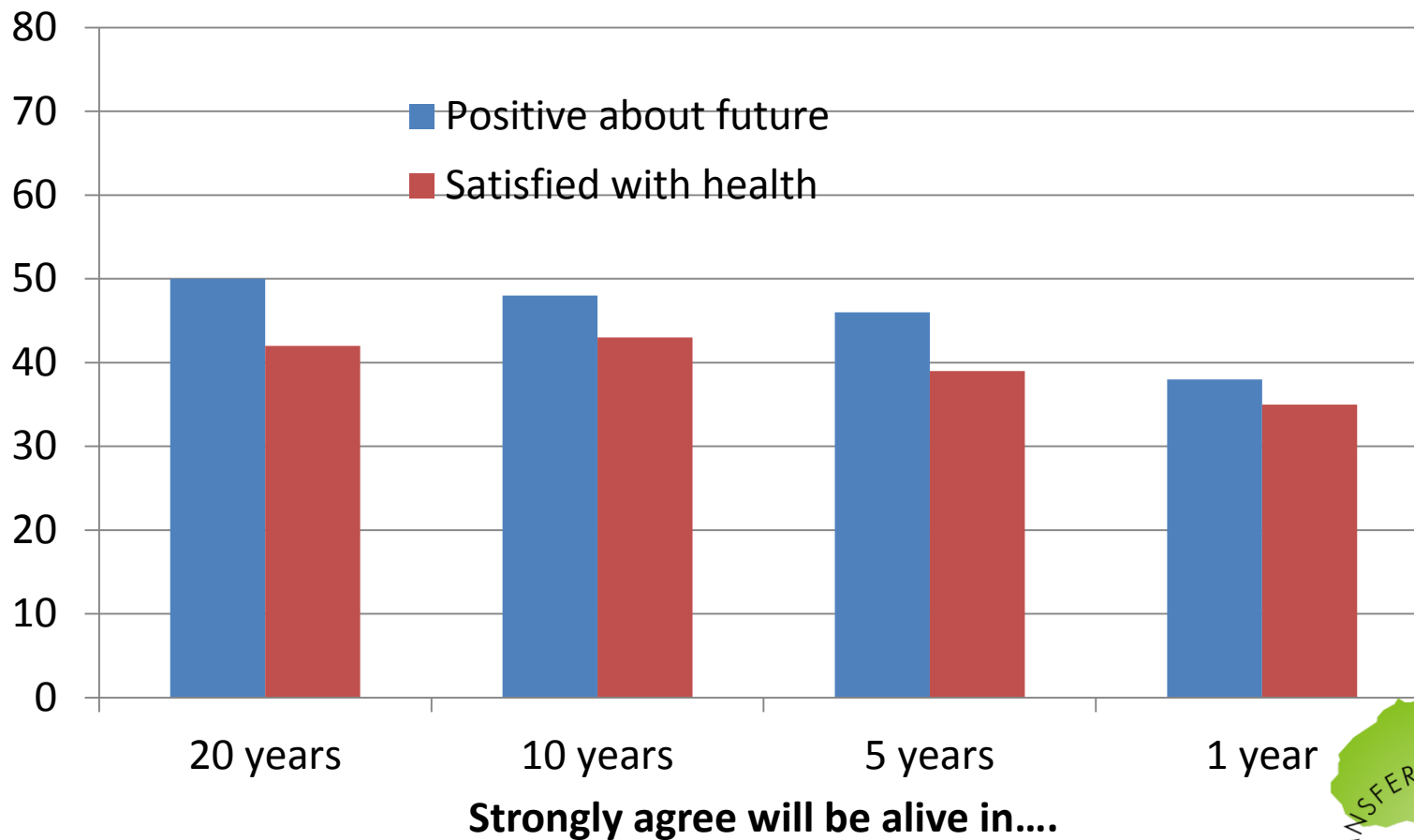


Strongly agree will be alive in...

Kenya CT-OVC Young Adults (mean age=55)

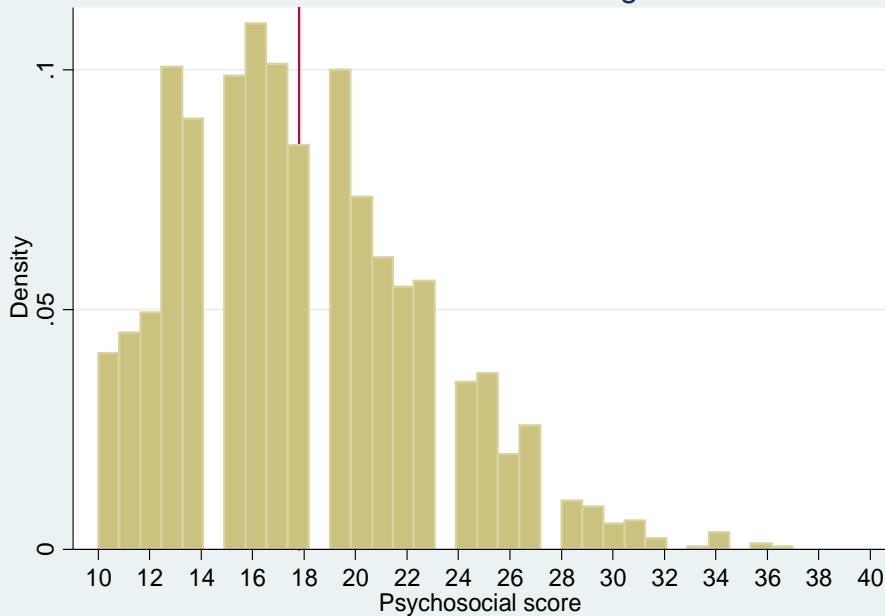


Does life expectancy correlate with affect? Kenya CT-OVC adults

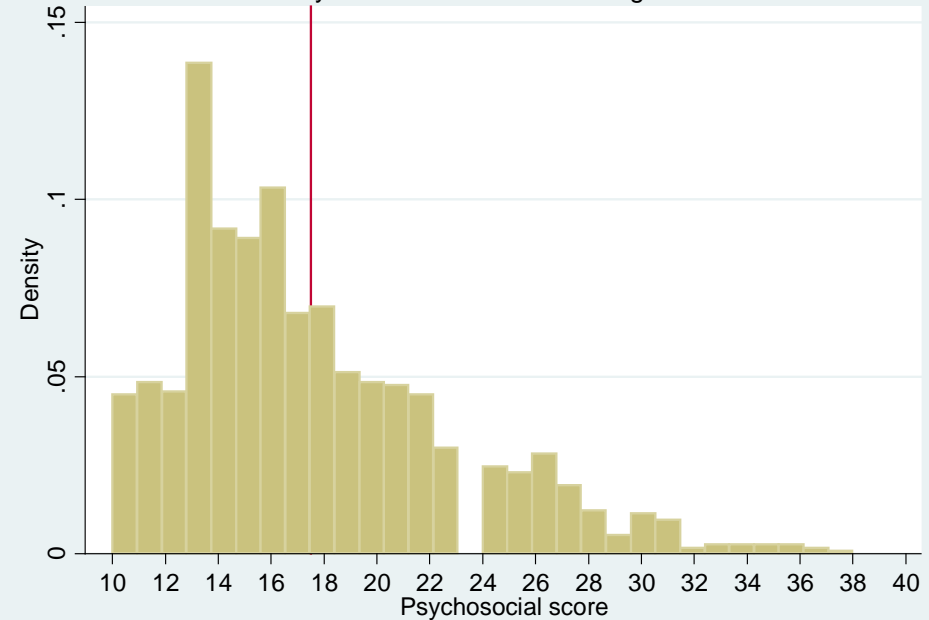


Center for Epidemiological Studies Depression Scale short 10-item version [CESD-10]

Zambia MCP Adolescents Age 13-17



Kenya CT-OVC Adolescents Age 15-18



Impact of LEAP on whether main respondent for household felt happy

Are you happy with your life?

	2010	2012	1 st difference
LEAP	0.40	0.71	0.31
Comparison Group	0.71	0.74	0.03
			DD=0.28

Kenya CT-OVC Adults

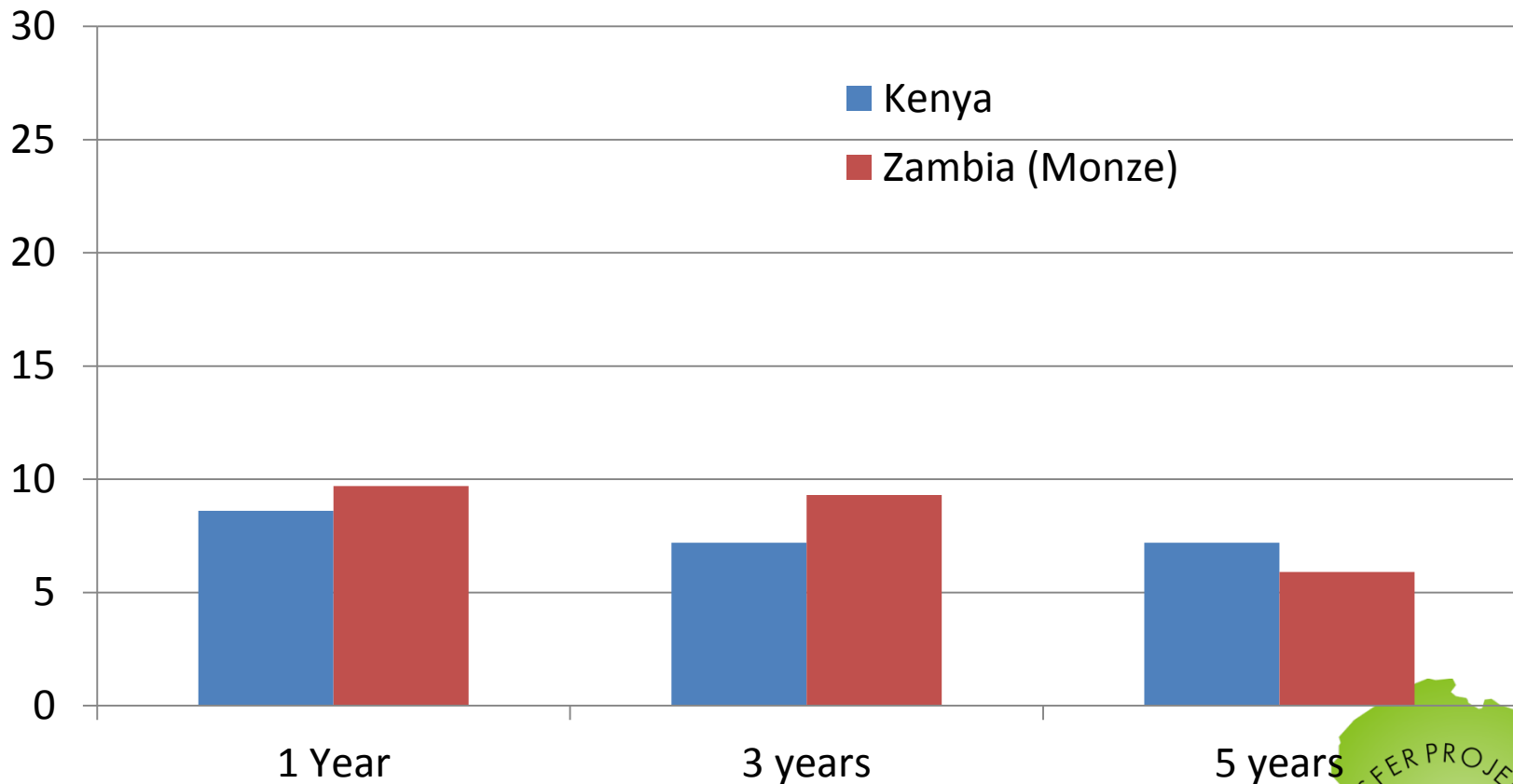
Do you experience positive feelings in your life? (strongly agree)

Cross section program impact = **5pp**



Program impacts (cross section)

Do you think your life will be better in...

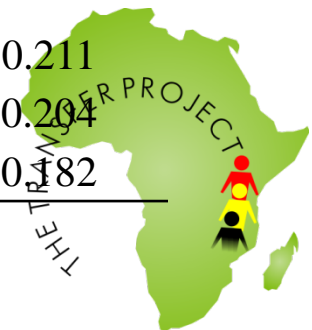


Closer look at impact of Zambia (Monze) SCT on these variables

Variable	<u>Treated</u>		<u>Comparison group</u>	
	N	Mean	N	Mean
Will wait one month for less money	514	0.123	501	0.076
<u>Will wait one month for:*</u>				
ZMK 200,000	452	0.024	468	0.026
ZMK 300,000	452	0.323	467	0.236
ZMK 400,000	452	0.511	467	0.398
ZMK 500,000	452	0.586	467	0.480
ZMK 600,000	452	0.593	463	0.492
Quality of life score (log)	515	2.739	505	2.687
Satisfied with health	515	0.798	505	0.752
Generally happy	515	0.841	506	0.781
<u>Expect life will be better in:</u>				
1 year	515	0.307	506	0.211
2 years	514	0.294	506	0.204
3 years	515	0.239	506	0.182

Psychological measures

* Only calculated for the 88 percent of sample who would not wait for less money.



Effect of SCT on propensity to wait for money, psychological outcomes

[Cross sectional estimates with covariates]

Outcome	Treatment effect	t-statistic	N	R-squared
Will wait for ZK 300,000 (no covariates)	0.087	(2.97)	919	0.010
Will wait for ZK 300,000	0.087	(2.94)	917	0.019
<u>Psychological Measures</u>				
Quality of Life Index	0.052	(2.02)	1,017	0.022
Satisfied with health?	0.045	(1.72)	1,017	0.013
Generally happy?	0.061	(2.48)	1,018	0.013
1 year	0.097	(3.59)	1,018	0.047
2 years	0.093	(3.52)	1,017	0.056
5 years	0.059	(2.35)	1,018	0.062

Each row is a separate liner probability (OLS) regression

**Strong treatment effect on waiting for money, happiness,
expectations of the future**



How does SCT affect willingness to wait for money? Is it through psychological measures?

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treatment effect	0.087 (2.94)	0.078 (2.69)	0.082 (2.80)	0.079 (2.69)	0.069 (2.37)	0.068 (2.31)	0.075 (2.58)
Quality of life		0.181 (5.11)					
Satisfied with health			0.156 (4.54)				
Generally happy				0.136 (3.70)			
Life better in 1 year					0.200 (5.76)		
Life better in 2 years						0.199 (5.59)	
Life better in 5 years							0.219 (5.73)
Observations	917	916	916	917	917	917	917

No!

Psychological measures affect willingness to wait for money



Each column is a separate regression; linear probability coefficients with t-statistics



Falsification test: replicate analysis using untreated and 'unmatched'; should not find any effects

Outcome	Original T status	t-statistic	N	R-squared
Will wait for ZK 300,000 (no covariates)	0.017	(0.60)	1,141	0.004
Will wait for ZK 300,000	0.017	(0.62)	1,135	0.005
<u>Psychological Measures</u>				
Quality of Life Index	-0.015	(-0.74)	1,275	0.048
Satisfied with health?	0.011	(0.53)	1,276	0.021
Generally happy?	-0.005	(-0.26)	1,276	0.019
1 year	0.040	(1.60)	1,275	0.048
2 years	0.022	(0.89)	1,275	0.049
5 years	0.009	(0.37)	1,275	0.046

Each row is a separate liner probability (OLS) regression



No effect of assignment to treatment status on our outcomes; neither group received cash transfer.



Additional checks--effect still holds

- Control for desperation from short term circumstances
 - wealth; crop failure; poor rain; death in household
- Check for liquidity or borrowing constraints
 - SCT reduces borrowing among T group by 1.64pp (overall mean is 3%)
 - But borrowing status does not diminish treatment effect on willingness to wait for money



Preliminary results from Kenya CT-OVC

- No impact of program on willingness to wait for money, nor on risk aversion
- These can be treated as exogenous, next step is to check whether they moderate program impacts (pending)

