

Upstream vs. Downstream Interventions: What do people prefer and why?

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BACKGROUND

Public health interventions have a downstream bias¹. Despite strong evidence for the long-term effectiveness of upstream² (prevention), most interventions have a downstream (reactive) focus³.

In this study, we investigate whether the downstream preference exists at the individual-level. We also explore the role of empathy as a psychological factor that sways people to favor downstream interventions.

We predict that:

1. People will allocate more money and time towards downstream (vs. upstream) interventions.
2. Emotional empathy will positively correlate with downstream preference.

METHOD

Procedure:

Participants compared 3 pairs of equally effective interventions (one downstream and one upstream per pair) based on real-life public health programs for children and teens. For each pair, participants which intervention they would prioritize for key decisions.

Participants

University undergraduate sample

N	% Women	% Men	% Nonbinary
555	72%	24%	2%

Measures

Empathy: Multidimensional Emotional Empathy Scale (MDEES) e.g., “The suffering of others deeply disturbs me.”

Preference:

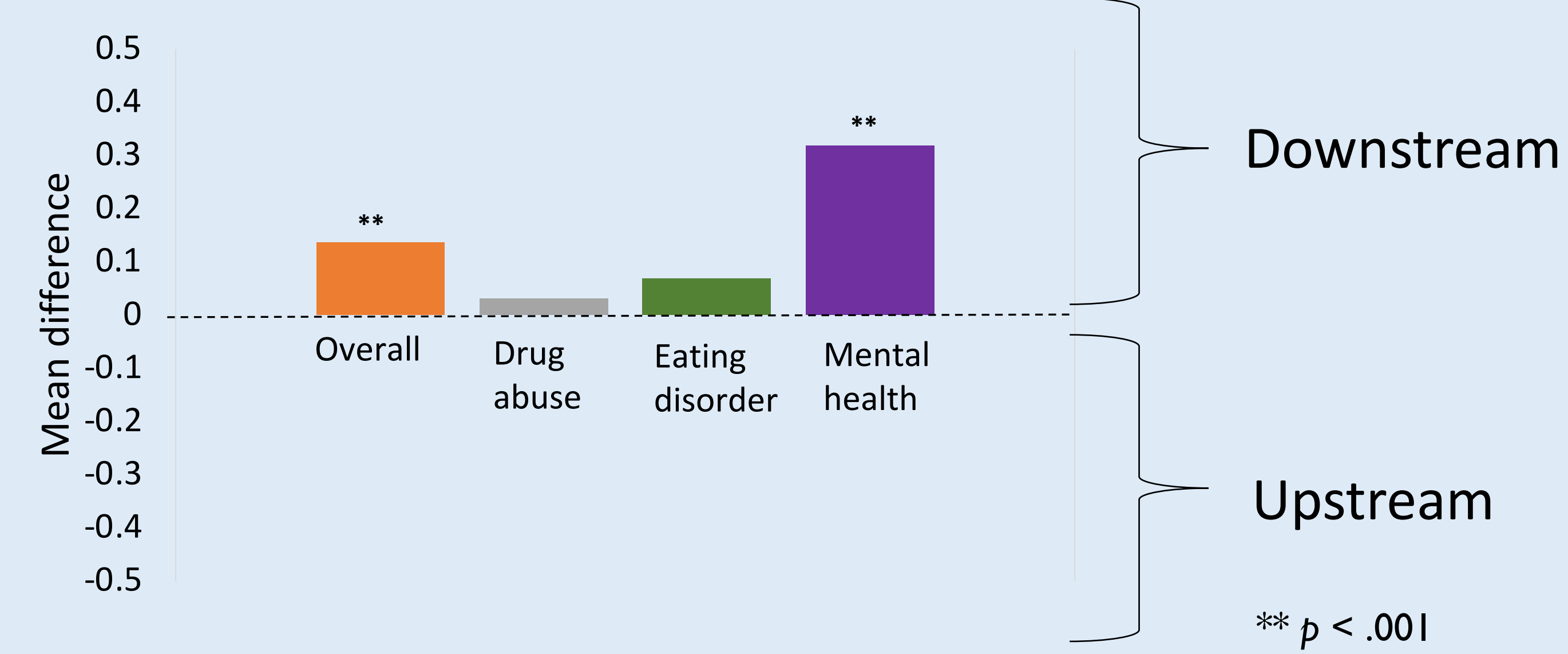
- Increase budget
- Not cutting budget
- Volunteering time

Rated on a 6-point scale to indicate which intervention they favored out of the two types.

RESULTS

Preferences across programs rated

Participants overall preferred downstream (vs. upstream) interventions.



Mean differences within program preference

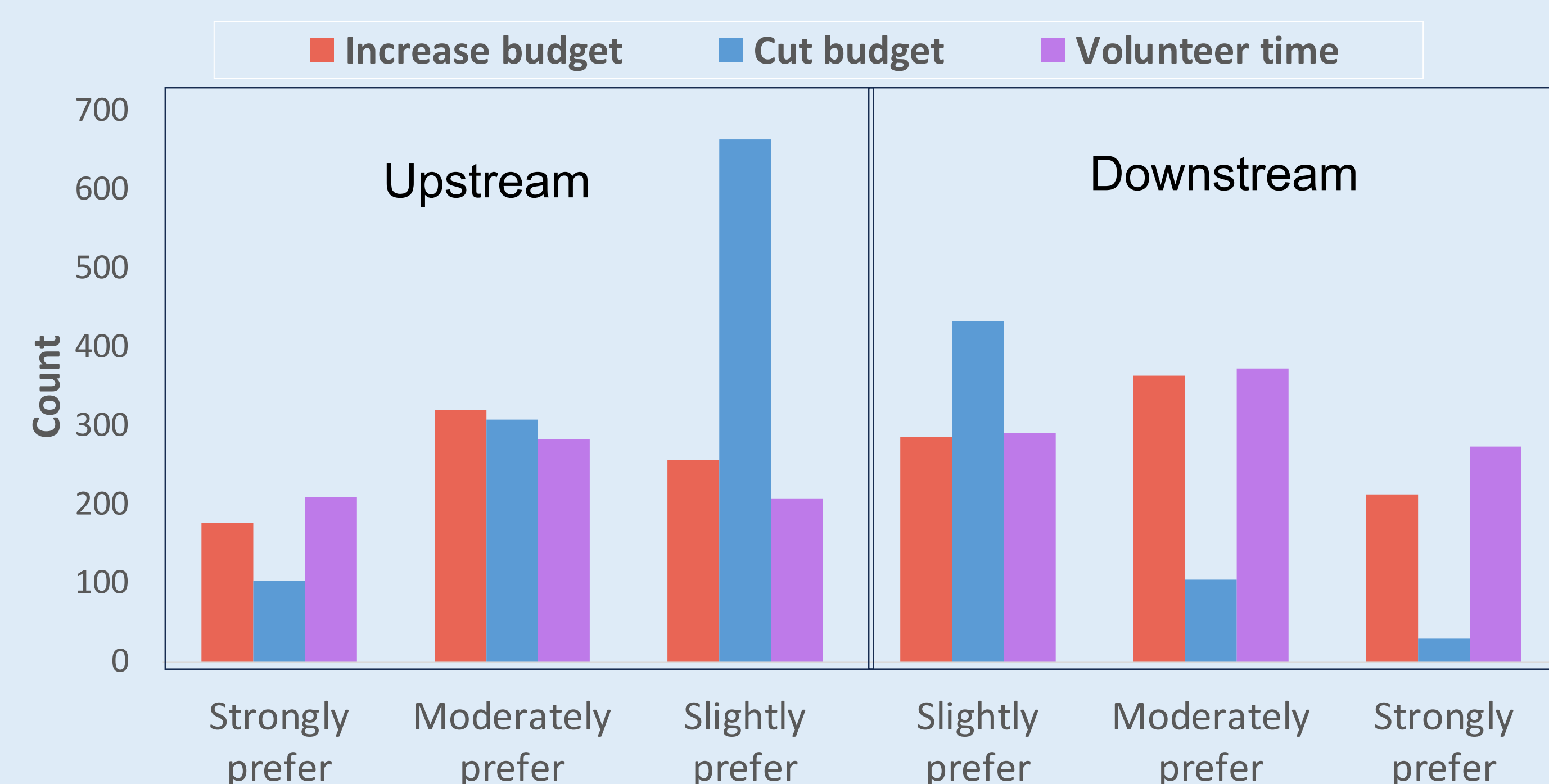
Participants were willing to give more money and time to downstream (vs. upstream) interventions.

	Across programs	Drug abuse	Eating disorder	Mental health
Increase budget	0.10*	-0.02	0.02	0.31**
Not cut budget	0.11*	-0.01	0.11*	0.21**
Volunteer time	0.20**	0.12*	0.06	0.43**

* $p < .05$ ** $p < .001$

Variability in Preferences across Decisions

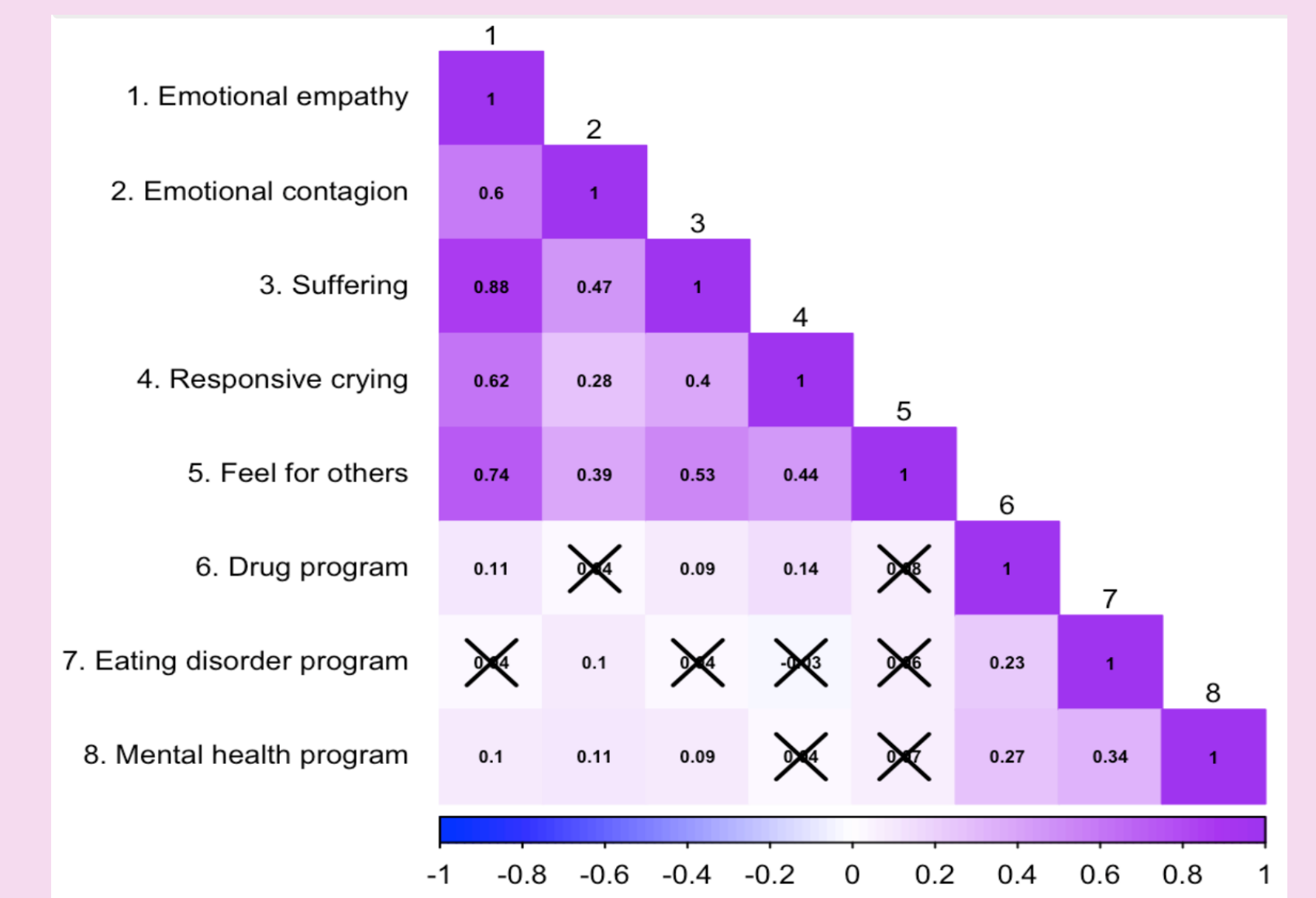
Participants were more protective of budget cuts for downstream interventions.



RESULTS

Empathy and intervention programs

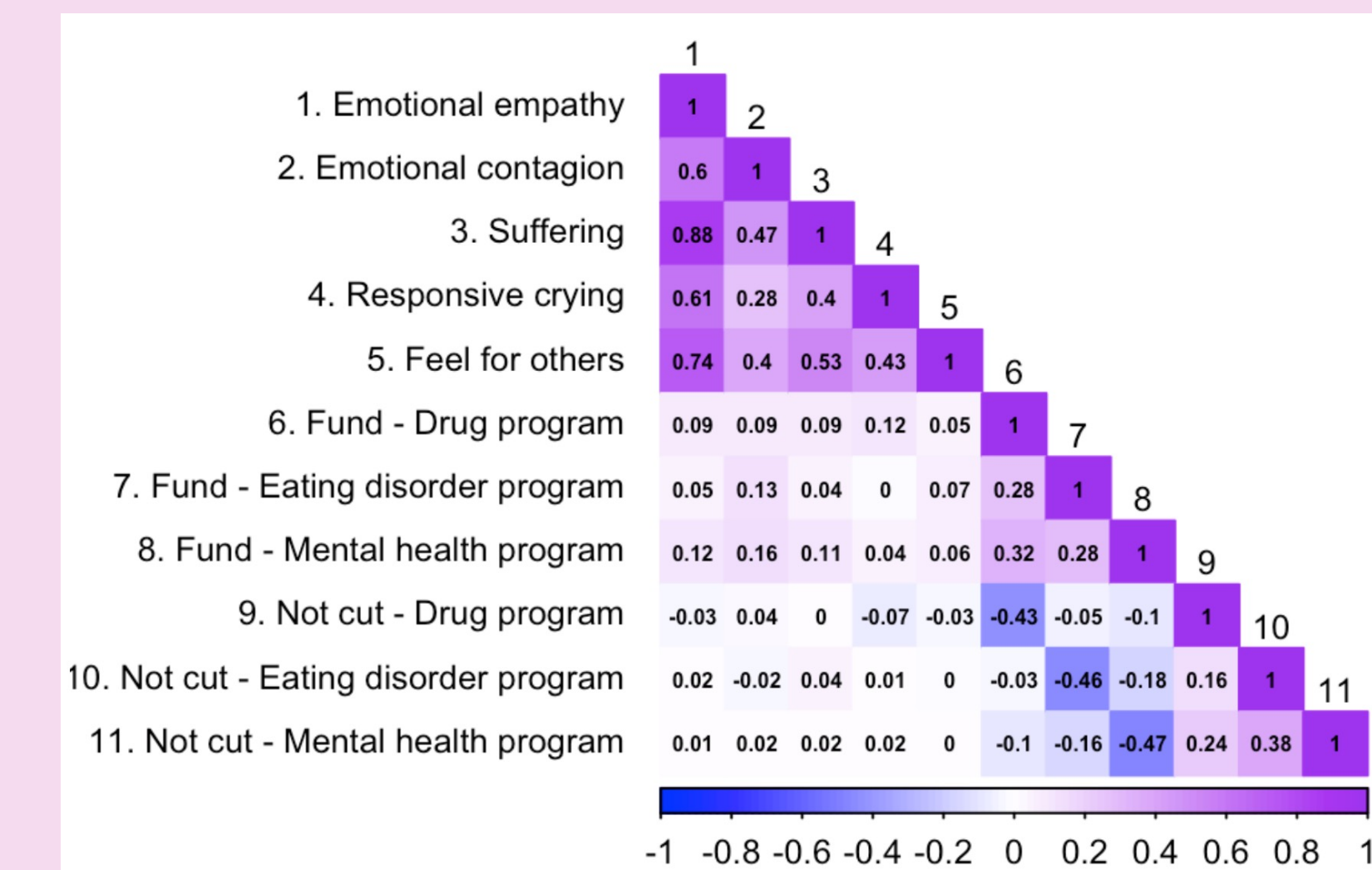
Participants higher in emotional empathy preferred downstream programs.



Boxes marked “X” $p > .05$

Empathy and decisions within programs

Participants higher in emotional empathy generally prefer to protect budget of downstream interventions, except for drug programs



DISCUSSION AND FUTURE DIRECTIONS

When choosing between equally effective interventions:

- People preferred downstream interventions.
- Mental health program for teens was preferred.
- Participants preferred to “protect” funding of downstream programming.

Empathy may get in the way of more effective upstream prevention approaches to public health challenges. This result suggests the need for tools that engage people’s empathy for upstream solutions.

REFERENCES

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3. Fehily, C., Hodder, R., Bartlem, K., Wiggers, J., Wolfenden, L., Dray, J., Bailey, J., Wilczynska, M., Stockings, E., Clinton-McHarg, T., Regan, T., & Bowman, J. (2020). The effectiveness of interventions to increase preventive care provision for chronic disease risk behaviours in mental health settings: A systematic review and meta-analysis. *Preventive medicine reports, 19*, 101108. <https://doi.org/10.1016/j.pmedr.2020.101108>