

Main Findings:

Meta-Analysis: Cognitive ability is negatively related to risk aversion in the domain of gains, but neither related to it in the domain of losses nor in the mixed-domain (gains/losses).

Cognitive ability and risk aversion: A systematic review and meta-analysis (*Judgement and Decision Making*, 14(3), 2019, 234-279)

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INTRODUCTION

- Risk aversion is assumed to be a key determinant of human decision making.
- It has been argued that highly intelligent individuals tend to be less risk averse (Benjamin, Brown & Shapiro, 2013; Dohmen, Falk, Huffman & Sunde, 2010, 2018).
- The negative relationship between cognitive ability and risk aversion has, however, not been found consistently (Andersson et al., 2016)
- In this study the nature of the relation between cognitive ability and risk aversion is investigated through a systematic literature review and meta-analysis.

METHODOLOGY

- To identify relevant studies Econlit, PsycInfo, Business Source Complete, Academic Search Complete, and Google scholar were searched.
- A total of 633 studies were extracted for full text screening. After carefully reviewing all papers, 97 studies were included in the domain of gains, 41 in the mixed domain and 12 in the domain of losses.
- A random-effects model meta-analysis using the restricted maximum likelihood estimator (REML; Viechtbauer, 2010) was performed.

RESULTS

- Cognitive ability is negatively related to risk aversion in the domain of gains, but not in the mixed domain or domain of losses (see Table 1).
- There is no evidence of publication bias (see funnel plots in Figure 1)
- Overall, none of the moderator variables investigated consistently influenced the relation between cognitive ability and risk aversion across the domain of gains, mixed and losses.

DISCUSSION

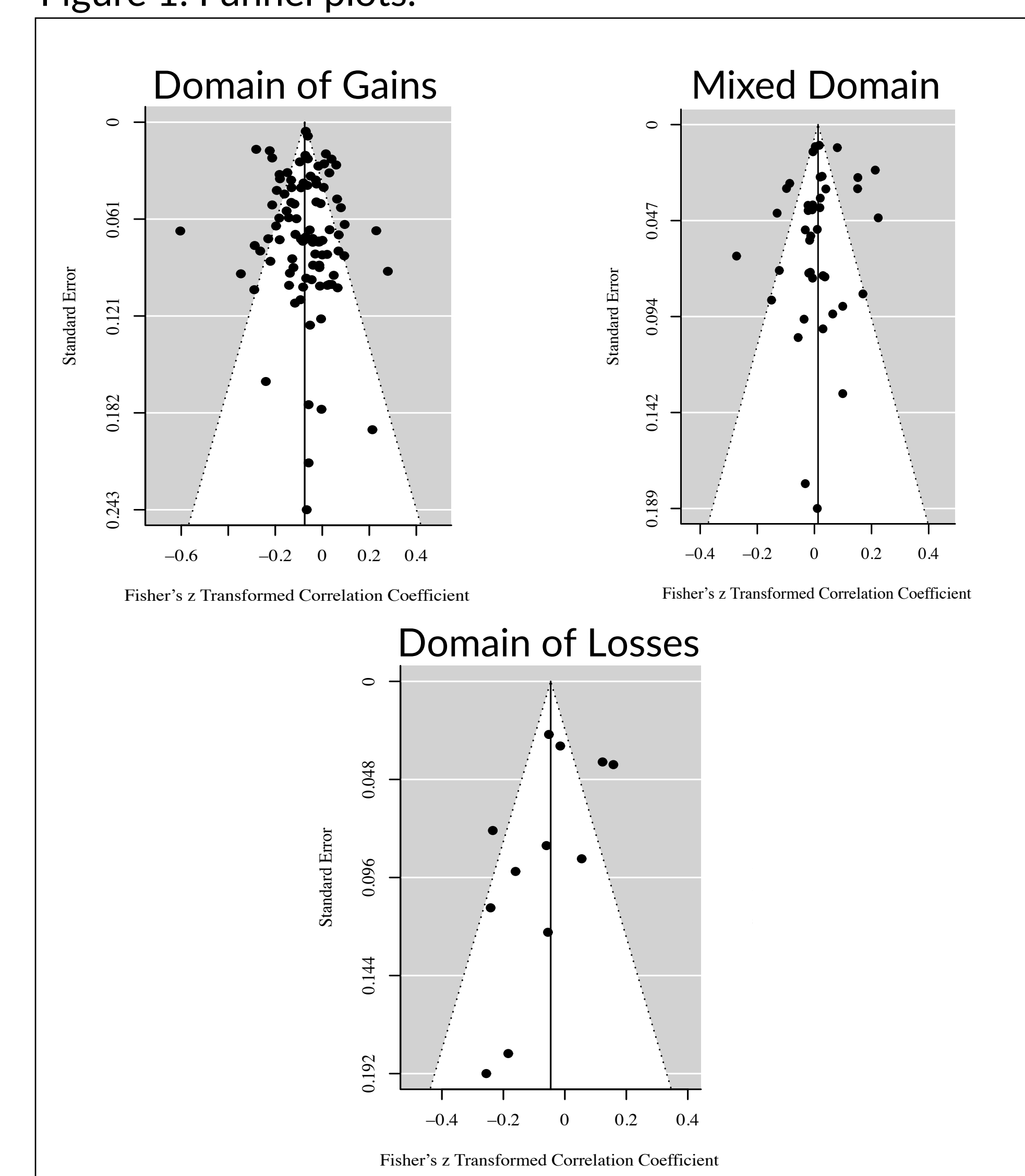
- The fact that the relation between cognitive ability and risk aversion is non-existent or rather weak across all three domains suggest that risk preferences may reflect an independent construct which does not substantially overlap with intelligence.
- Due to the weak nature of the association between cognitive ability and risk aversion, one should be cautious in drawing conclusions about the practical significance of this relationship.
- Future research should aim to gain a deeper understanding of the relationship between cognitive ability and risk aversion using more reliable measures to elicit risk preferences.

TABLES AND FIGURES

Table 1. Random-effects model meta-analysis.

Domain	K	N	ρ	Z	p-value
Gains	97	90,723	-.07	-6.11	p < .001
Mixed	41	50,936	.01	0.82	p > .05
Losses	12	4,544	-.05	-1.10	p > .05

Figure 1. Funnel plots.

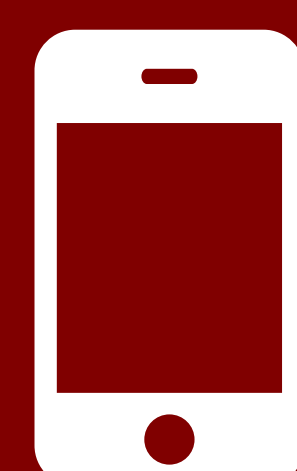


REFERENCES

- Andersson, O., Holm, H. J., Tyran, J.-R., & Wengström, E. (2016). Risk aversion relates to cognitive ability: Preferences or noise? *Journal of the European Economic Association*, 14(5), 1129–1154.
- Benjamin, D. J., Brown, S. A., & Shapiro, J. M. (2013). Who is 'behavioral'? Cognitive ability and anomalous preferences. *Journal of the European Economic Association*, 11(6), 1231–1255.
- Dohmen, T., Falk, A., Huffman, D., & Sunde, U. (2010). Are Risk Aversion and Impatience Related to Cognitive Ability? *American Economic Review*, 100(3), 1238–1260.
- Dohmen, T., Falk, A., Huffman, D., & Sunde, U. (2018). On the Relationship between Cognitive Ability and Risk Preference. *Journal of Economic Perspectives*, 32(2), 115–134.
- Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *J Stat Softw*, 36(3), 1–48.



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