DoPL

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Author Note

The authors made the following contributions. Ithurburn, Andrew: Conceptualization, Writing - Original Draft Preparation, Writing - Review & Editing; Moore, Adam: Writing - Review & Editing.

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DoPL

Methods

Participants were a convenience sample of 111 individuals from Prolific Academic's crowdsourcing platform (www.prolific.io). Prolific Academic is an online crowdsourcing service that provides participants access to studies hosted on third party websites. Participants were required to be 18 years of age or older and be able to read and understand English. Participants received £4.00, which is above the current minimum wage pro-rata in the United Kingdom, as compensation for completing the survey. The Psychology Research Ethics Committee at the University of Edinburgh approved all study procedures [ref: ####]. The present study was pre-registered along with a copy of anonymized data and copy of R code is available at (https://osf.io/s4j7y).

Materials

Demographic Questionnaire. In a demographic questionnaire administered prior to the main survey, participants were invited to respond to questions about their self-identified demographic characteristics such as gender, ethnicity, and ethnic origin.

Dominance, Prestige, and Leadership Orientation. The 18-item Dominance, Prestige, and Leadership scale [DoPL; Suessenbach, Loughnan, Schönbrodt, and Moore (2019)], is used to measure dominance, prestige, and leadership orientation. Each question corresponds to one of the three domains. Each domain is scored across six unique items related to those domains (e.g., "I relish opportunities in which I can lead others" for leadership) rated on a scale from 0 (Strongly disagree) to 5 (Strongly agree). Internal consistency reliability for the current sample is $\alpha = 0.86$.

Domain Specific Risk-taking Scale (DOSPERT; Weber, Blais, and Betz (2002)) is a scale assessing individuals' likelihood of engaging in risky behaviors within 5 domain

specific risky situations: financial, social, recreational, health and safety, and ethical situations. Each risky situation is then rated on a five-point Likert scale (1 being very unlikely and 5 being very likely). Two additional five-point Likert scales assess risk perception and expected benefits (1 being not at all risky and 5 being extremely risky; 1 being no benefits at all and 5 being great benefits) respectively. Example risky situations are "Admitting that your tastes are different from those of a friend" and "Drinking heavily at a social function." Internal consistency reliability for the current samples for the 3 sub-domains are $\alpha = 0.85$, $\alpha = 0.90$, $\alpha = 0.92$ respectively.

Procedure

Participants were recruited via a study landing page on Prolific's website or via a direct e-mail to eligible participants (Prolific FAQ, 2018). The study landing page included a brief description of the study including any risks and benefits along with expected compensation for successful completion. Participants accepted participation in the experiment and were directed to the main survey (Qualtrics, Inc; Provo, UT) they were shown a brief message on study consent.

Once participants consented to participate in the experiment they answered a series of demographic questions. Once completed, participants completed the Dominance, Prestige, and Leadership Scale and the Domain Specific Risk-taking scale. The two scales were counterbalanced to account for order effects. After completion of the main survey, participants were shown a debriefing statement that briefly mentions the purpose of the experiment along with the contact information of the main researcher (AI). Participants were compensated £4.00 via Prolific Academic.

Data analysis

Demographic characteristics were analyzed using a multiple regression for continuous variables (age) and Chi-square tests for categorical variables (gender, race, ethnicity, ethnic origin, and education). Means and standard deviations were calculated for the relevant scales (i.e., DoPL and DOSPERT). All analyses were done using (R Core Team, 2021) along with (Stan Development Team, 2020) package.

Results

One hundred and eleven individuals completed the main survey. Of these individuals, 111 completed all sections without incomplete data and were therefore retained in most data analyses. In later analyses to account for outliers two participants had to be excluded from the dataset. Table 1 shows the demographic information for the participants.

```
##
## Call:
## lm(formula = Age ~ Gender, data = experiment_dataset_analysis)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.2299 -0.6219 -0.2961  0.2468  3.4391
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  -0.2298     0.1318  -1.744  0.08417 .
## Gender1       0.4994     0.1891   2.641  0.00953 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
## Residual standard error: 0.9777 on 105 degrees of freedom
##   (2 observations deleted due to missingness)
## Multiple R-squared:  0.06229,    Adjusted R-squared:  0.05336
## F-statistic: 6.975 on 1 and 105 DF,  p-value: 0.009525
```

Dominance, Leadership, and Prestige

All participants completed the dominance, leadership, and prestige scale (Suessenbach, Loughnan, Schönbrodt, and Moore (2019)). Empirically, men have generally been more dominance oriented in their behavior (citation). Following this we chose for a somewhat larger positive dominance motive prior, when accounting for gender in the Bayesian we chose a somewhat negative correlation relating to men tending to be more dominance motivated. Our results followed this hypotheses ()

Domain Specific Risk-Taking

Interactions

Discussion

References

R Core Team. (2021). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from https://www.R-project.org/

Stan Development Team. (2020). RStan: The R interface to Stan. Retrieved from http://mc-stan.org/

Suessenbach, F., Loughnan, S., Schönbrodt, F. D., & Moore, A. B. (2019). The dominance, prestige, and leadership account of social power motives. *European Journal of Personality*, *33*(1), 7–33. https://doi.org/10.1002/per.2184

Weber, E. U., Blais, A.-R., & Betz, N. E. (2002). A domain-specific risk-attitude scale: Measuring risk perceptions and risk behaviors. *Journal of Behavioral Decision Making*, *15*(4), 263–290. https://doi.org/10.1002/bdm.414

Table 1

Variables	
NA	n = 111
Age	
Mean (SD)	26.8 (9.2)
Median [Min, Max]	24 [18, 61]
Gender	
Female	54 (48.6%)
Gender Non-Binary	2 (1.8%)
Male	55 (49.5%)
Ethnicity	
Scottish	2 (1.8%)
English	10 (9.0%)
European	77 (69.4%)
Latin American	2 (1.8%)
Asian	6 (5.4%)
Arab	0 (0.0%)
African	8 (7.2%)
Other	6 (5.4%)
Prefer not to respond	0 (0.0%)
Education	
Primary School	4 (3.6%)
GCSes or Equivalent	8 (7.2%)
A-Levels or Equivalent	32 (28.8%)
University Undergraduate Program	44 (39.6%)
University Postgraduate Program	21 (18.9%)
Doctoral Degree	1 (0.9%)