PolyPrefs 4 Pre-Registration Draft

**1. Data Collection. Have any data been collected for this study already?**

No, no data have been collected for this study yet.

**2. Hypothesis. What’s the main question being asked, or hypothesis being tested in this study?**

When given the opportunity to take on multiple ideal long-term partners: (1) do people want these partners to be qualitatively different, and (2) are preferences for each partner compensatory or maximizing?

**3. Dependent variable. Describe the key dependent variable(s) specifying how they will be measured.**

Participants will complete a budget allocation paradigm, asking them to allocate 70 points between 7 traits (ambition, financial prospects, good in bed, intelligence, kindness, physical attractiveness, and status) in 2 ideal partners (partner Blue and partner Orange). Preferences for traits in each partner will be measured with the number of points allocated to each trait in either partner.

**4. Conditions. How many and which conditions will participants be assigned to?**

There are no conditions.

**5. Analyses. Specify exactly which analyses you will conduct to examine the main question/hypothesis.**

*Cluster Analysis*

We will run a k-Means cluster analysis using the preference values of partner Blue and partner Orange from the budget allocation paradigm. We will use a scree plot to determine the appropriate number of clusters that explain the variation in our data. Prior to the cluster analysis, we will use the set.seed() function to ensure results are reproducible.

*Chi-Square Tests of Independence*

To examine whether men and women are choosing different combinations of partner “types” (clusters) at different rates, we will then run a chi-square test of independence with gender (female = 0, male = 1) and cluster (1, 2, 3, etc.). We will also run a chi-square test of independence with partner Blue cluster (1, 2, 3, etc.) and partner Orange cluster (1, 2, 3, etc.) to examine whether the “type” of partner created for one ideal partner influences “type” of partner created for the other ideal partner.

In order to test whether either sex is more or less likely to want at least one ideal partner in a certain cluster, we will also run chi-square test of independence with the variables of gender and whether participants had at least one ideal partner in cluster 1 (0 = neither partner orange nor blue are in cluster 1; 1 = partner orange and/or partner blue are in cluster 1). We will run this test separately for each of the clusters.

If there are not enough datapoints in each of the cells to run the chi-square tests, we will instead run Fisher’s exact tests using the same variables.

*Analyses of Variance (ANOVAs)*

Finally, we will conduct a series of ANOVAS exploring the relationship between cluster combination for partners orange and blue and investment. We will conduct an ANOVA with 2 predictor variables: whether the clusters for partners orange and blue are the same or different (0 = same, 1 = different) and participant gender (female = 0, male = 1), and deviation from equal financial investment as the outcome variable. The variable measuring deviation from equal financial investment was created by subtracting 4 points (in our survey, 4 = equal investment in partner blue and partner orange) from each participant’s raw financial investment score. Subsequent ANOVAs will include the same predictor variables, but the outcome variables will be (a) deviation from equal time investment and (b) deviation from equal emotional investment, both of which will be calculated in the same way as deviation from financial investment. If results of these ANOVAs are significant, we will use Tukey’s HSD tests to determine which means are significantly different from one another.

**6. Outliers and Exclusions. Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.**

Prior to data analysis, we will exclude respondents that could be bots based on their written responses. We will manually read through all the text responses and code them (1 = gibberish/bot, 0 = coherent response), and then exclude respondents whose responses are coded as gibberish.

We will also exclude respondents whose responses to the open-ended questions are duplicates of responses by other respondents, provided those responses are greater than 12 characters long.

We will exclude respondents who failed any of the attention check questions in our survey, and participants who did not complete all of the items used for the cluster analysis.

We will also exclude participants that do not identify as either a man or a woman.

We do not plan to exclude data points for being outliers.

**7. Sample Size. How many observations will be collected or what will determine sample size?**

We will collect a sample of n = 219 respondents. This number is based on a power analysis run based on the smallest effect size we found in a chi-square test in the previous study we conducted.

**8. Other. Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)**

*Secondary analyses:*

We will run chi-square tests with the ideal gender of partner blue (0 = female, 1 = male) and cluster of partner blue (1, 2, 3, etc.), and, separately, with the ideal gender of partner orange (0 = female, 1 = male) and cluster of partner orange (1, 2, 3, etc.).

Additionally, we will conduct a permutation test to determine whether clusters of partner orange and blue are more or less similar than (or equivalent to) chance.

*Variables collected for exploratory purposes:*

We also will be collecting participants’ actual romantic partners’ traits and participants’ reported investment in each partner. If we obtain enough participants who have multiple romantic partners, we will use the actual ratings of each partner's traits to conduct parallel analyses which mirror those performed for the ideal partner ratings (as described in question 5). Just as the ideal ratings will enable us to examine whether participants would *prefer* each of two ideal partners to qualitatively differ, these analyses will enable us to examine whether participants involved in multiple relationships *end up* with qualitatively different partners.

We will collect variables asking about jealousy proneness and intensity for each of the participants’ romantic partners. These will be measured with a 7-point likert scale, where 1 = not at all prone and 7 = extremely prone for the proneness items, and 1 = a little jealousy and 7 = extremely jealous for the intensity items. We will also collect participants’ self-reported imagined jealousy to sexual and emotional scenarios, measured with a 7-point likert scale ranging from 1=not at all jealous to 7 = extremely jealous.

**9. Name. Give a title for this AsPredicted pre-registration. Suggestion: use the name of this project, followed by study description.**

PolyPrefs4 – Polyamorous mate preferences

**10. Type of study**

Survey.

**11. Data source**

Prolific

Other: Facebook, Reddit, and other online communities, depending on whether we can obtain a large enough sample from prolific.