I have had the opportunity to review Stage 1 Registered Report 574: “Impulsivity and online sports betting behavior: Untangling the causal relationship”. There are potential merits to this study, especially the synthesis of gambling records with survey data, which remains an important unexplored method in gambling studies. However, I have noted several issues with the planned research, including one major issue regarding the study’s ability to achieve a large enough sample size by Wave 3 to ensure adequate power for conducting the main analyses. I would entertain a rebuttal, or otherwise any other assurance, from the study’s authors regarding this issue. Pending this type of assurance, however, I am hesitant to recommend signing off the current research plan as it stands.

For each issue, I have put exact text from the manuscript *in italics* and my commentary **in bold**

**Major**

1)

*Given the planned three waves, our target sample size for all three waves required to achieve a power of 80%, which translates into n=370 according to the bootstrap method.*

*AND*

*By Nov 2023 we have successfully recruited the required number of participants for wave 1. Tipico sent study invitations to 27,000 account holders between October 20, 2023 and November 22, 2023. Of those invited, 1,553 participated in our study (response rate = 5,8%). Of these, 38,6% had to be excluded for data quality reasons so that we received n=954 usable data sets in the first wave.*

*AND*

*After the theoretical considerations regarding sample size, we took into account the response and dropout rates. In another study of online sports bettors from our lab, where online surveys were also conducted (RIGAB study; https://osf.io/k6c23/; Czernecka et al., 2023), the response rate was 13% of which a further 30% had to be excluded due to incomplete or implausible questionnaire data. Based on the experience from the RIGAB follow-up, a dropout of 60% is expected between the first online survey and the third survey wave 9 months later. Based on these response rates and dropout estimates, 925 participants need to participate in the first wave to achieve a sample of 370 participants in the third and final wave.*

**Reading through the cited study (Czernecka et al., 2023), I assume the authors are referring to this particular result:**

**“Of the 555 potential participants, 325 participated in the follow-up (58.5%)”.**

**If we we’re to expect this type of retention rate based on the baseline n = 954 across both subsequent waves, then we would expect approximately 558 respondents by Wave 2 and approximately 326 respondents by Wave 3, which is below the 370 respondent threshold identified in power analysis. There’s a lot to consider with this estimate, however. First off, what happens when we add the 30% reduction to both waves based on data cleaning? Conversely, would we expect the retention rates and data quality to increase at wave 3, as the study is self-selecting more willing and quality respondents at Wave 2? In any case, there remains the distinct possibility the study will be underpowered at Wave 3, and the study authors have not provided any sort of contingency plan for how they plan to address this possibility. This issue in particular makes me hesitant to greenlight this study for Stage 2 until I’ve seen the result of final (wave 3) data collection, or received some other adequate assurance/rebuttal to this issue.**

**Minor:**

1)

*Tipico sent study invitations to 27,000 account holders between October 20, 2023 and November 22, 2023. Of those invited, 1,553 participated in our study (response rate = 5,8%). Of these, 38,6% had to be excluded for data quality reasons so that we received n=954 usable data sets in the first wave*

*AND*

*We will try to estimate this selection bias with a nonresponder questionnaire asking about the reasons for not 4 participating in the study, and by using selected sociodemographic characteristics.*

**Do the authors have access to gambling records data of the full sample (27,000 account holders) in addition to the 954 who qualified for Wave 1? If so, a more guaranteed way to assess for selection bias would be to conduct basic inferential tests (e.g., median tests) of the important risky behavior measures they have ready access to (e.g., total stake, net losses, variability of betting odds) to see whether/extent to which the two samples differ? This would help to speak to the generalizability of the analytic sample, at least as it relates to the population of Tipico bettors?**

2)

*There will also be missing values for the variable ‘proportion of stakes to net income’ if participants chose to not report their net income.*

**What will the study do for missing cases on net income? Exclude them? If so, why are there no planned procedures to estimate this type of missing data? For example, if the study has access to gambling data, couldn’t this be used to estimate net income using multiple imputation procedures?**