Appendix 1. Study Design Table

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| Question | Hypothesis | Sampling plan | Analysis Plan | Rationale for deciding the sensitivity of the test for confirming or disconfirming the hypothesis | Interpretation given different outcomes | Theory that could be shown wrong by the outcomes | Results |
| Research Question 1: Are video games being consistently given the loot box self-regulatory warning label by the ESRB and PEGI? | Hypothesis 1: All games that have been labelled with the ‘In-Game Purchases (Includes Random Items)’ interactive element by the ESRB should also have been labelled with the ‘In-game Purchases (Includes Paid Random Items)’ content descriptor by PEGI and vice versa. | A combined list of (i) a list of 17 individual video game titles that were labelled by the ESRB with the loot box self-regulatory warning in the year leading up to 21 September 2022 and (ii) a list of all 64 individual video game titles that have ever been labelled by PEGI with the loot box self-regulatory warning. | Hypothesis 1 will be accepted if the consistency rate is ≥ 95%. Otherwise, Hypothesis 1 will be rejected. | Absolute null is not optimal. 5% of type 1 error control will be included to account for potential false positives. | A consistency rate of ≥ 95% will be viewed as the ESRB and PEGI having been sufficiently consistent.  A consistency rate of ≥ 80% but < 95% will be deemed as the self-regulatory measure not having been applied sufficiently consistently by the ESRB and PEGI, and thus the rating processes require improvements to enhance cohesion.  A consistency rate of < 80% will be seen as the measure having been applied inconsistently, and thus the rating processes being in need of significant improvements. | The self-regulatory loot box label has been consistently applied by the ESRB and PEGI. | The consistency rate was 39.4%. |
| Research Question 2: Are video games previously known to be high-grossing and contain loot boxes and presently containing loot boxes on the Google Play Store accurately displaying the IARC ‘In-Game Purchases (Includes Random Items)’ label? | Hypothesis 2: All titles in the present sample of video games previously known to contain loot boxes, and which are presently available on the Google Play Store and continue to contain loot boxes, will accurately display the IARC ‘In-Game Purchases (Includes Random Items)’ label. | A list of 100 (or potentially fewer) random games known to contain loot boxes derived from previous loot box prevalence studies (with inclusion and exclusion criteria detailed in the manuscript). | Hypothesis 2 will be accepted if the compliance rate is ≥ 95%. Otherwise, Hypothesis 2 will be rejected. | Absolute null is not optimal. 5% of type 1 error control will be included to account for potential false positives. | A compliance rate of ≥ 95% will be viewed as the self-regulatory measure having been nearly perfectly complied with and worthy of commendation.  A compliance rate of ≥ 80% but < 95% will be deemed as the self-regulatory measure having been mostly complied with, although improvements are needed.  A compliance rate of < 80% will be seen as the measure having not been adequately complied with and in need of significant improvements to achieve its regulatory aim. | Games containing loot boxes are displaying the self-regulatory loot box warning label. | The compliance rate was 29%. |