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Microtransactions Among Adolescents in Austria: Heavy Spenders and Links to Pathological Behaviors

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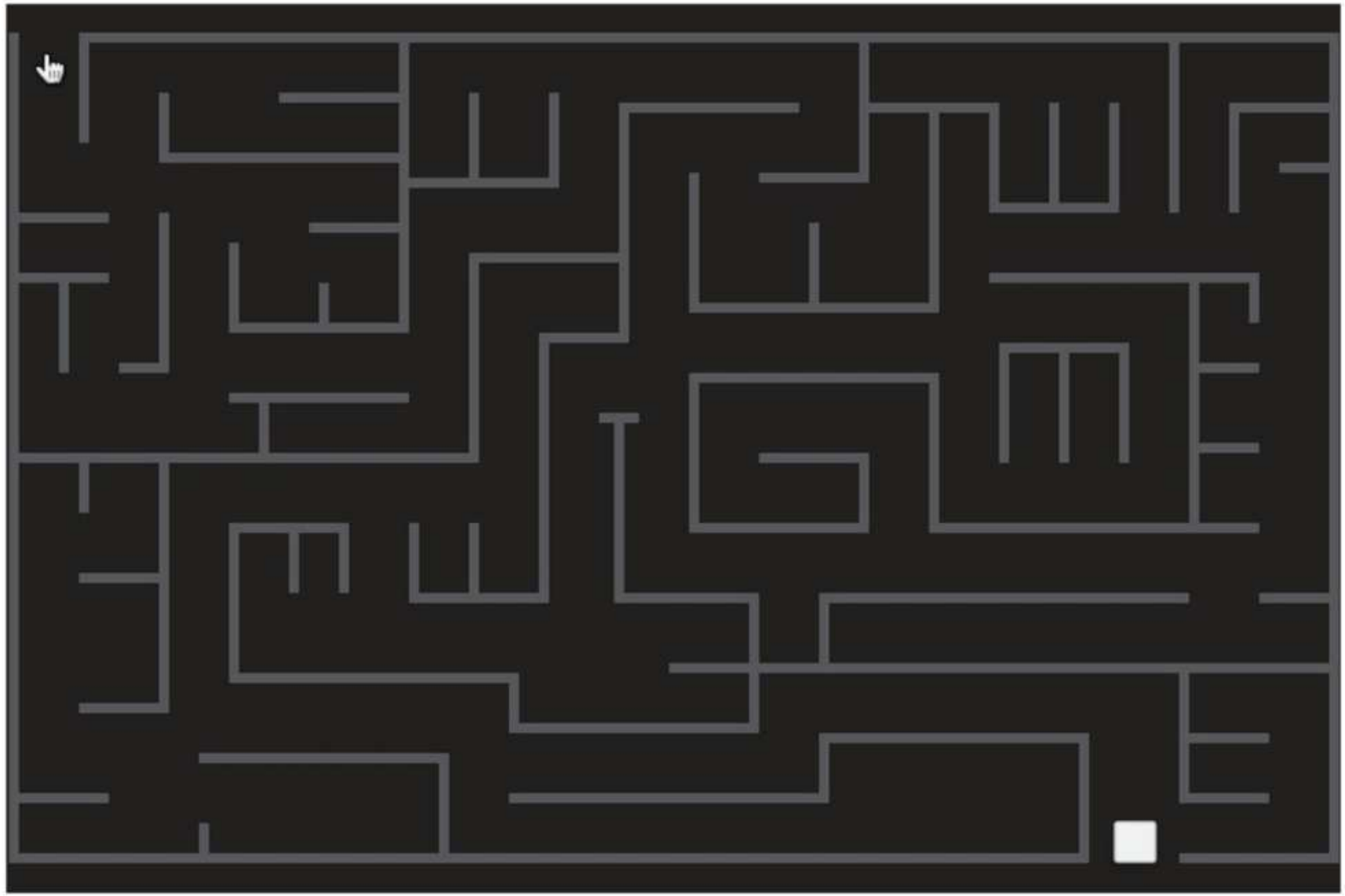
RAMPAGE
MIDWAY
CLASSIC ARCADE
RAMPAGE
GAUNTLET
JOUST
DEFENDER


SUPER NINTENDO
SELECT
START
X
A
Y
B

"Dark Patterns" Zagal, 2013



Artificial Scarcity

Lootboxes

Expense Concentrations

In the mobile game sector, 5.5% of the players generate 67% of the revenue.

(Fiedler et al. 2018: Die Konvergenz von Gaming und Gambling. Hamburg: Springer)

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Research Questions

Why do adolescents spend money on Free-to-play games?

How much money do teenagers in Austria spend on in-game-purchases?

Who spends the most money?

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Mixed Methods approach

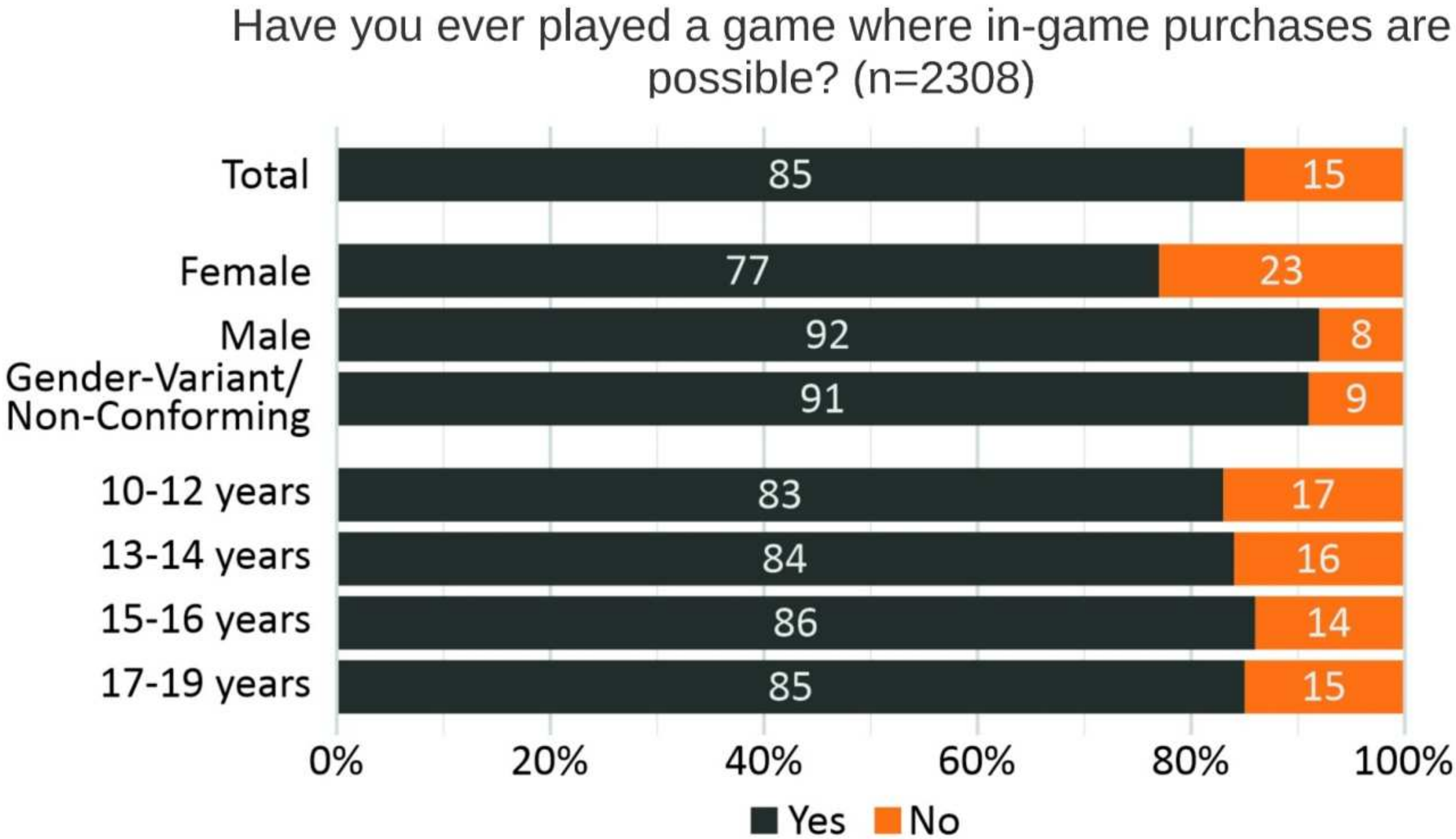
Qualitative interviews and group discussions with 29 adolescents aged 13 to 24 years old

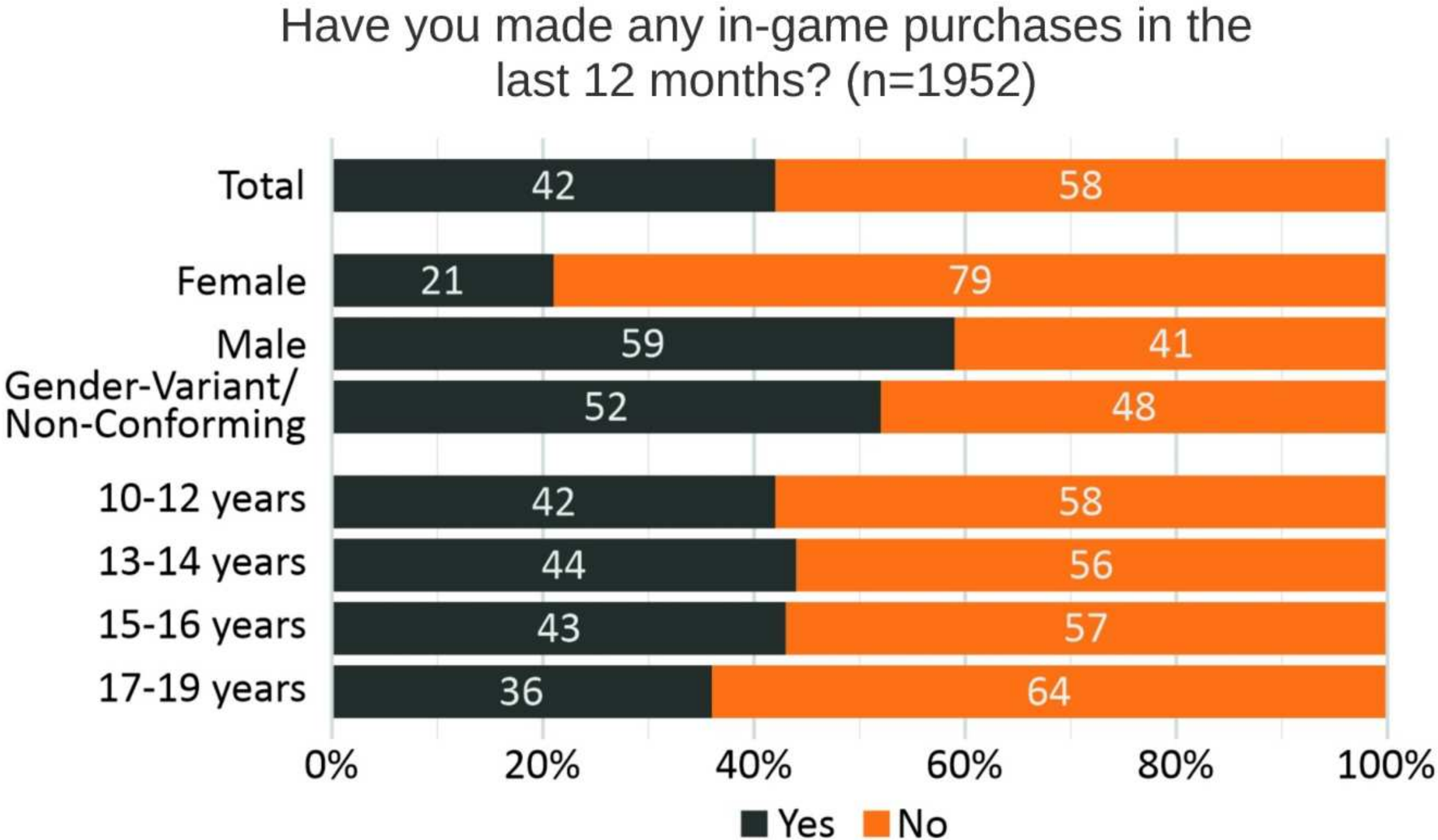
Quantitative survey of 2308 students aged 10 to 19 years from 82 schools

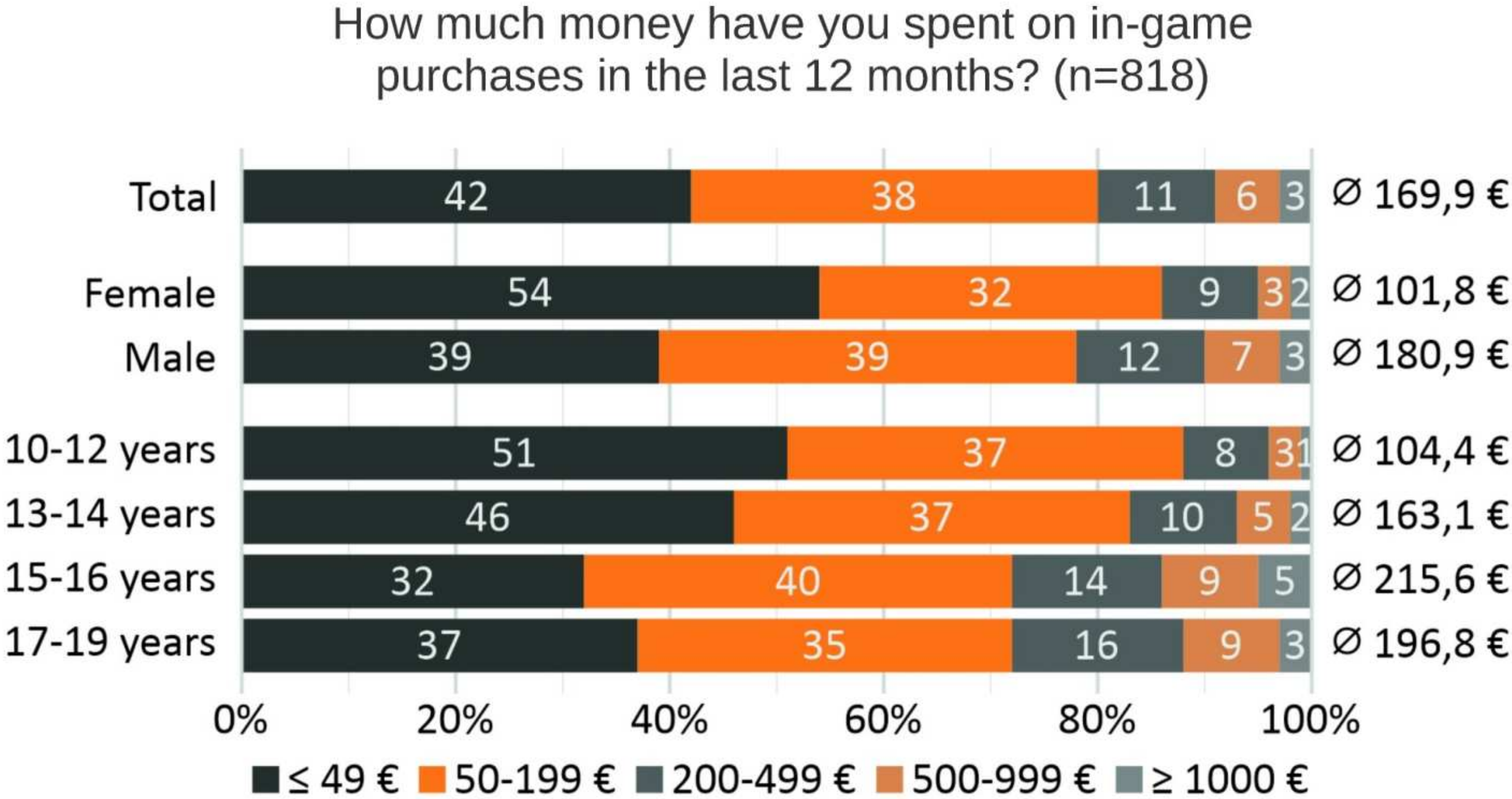
146 schools selected randomly; stratified sample; quota-representative with respect to federal state, school level, and school type

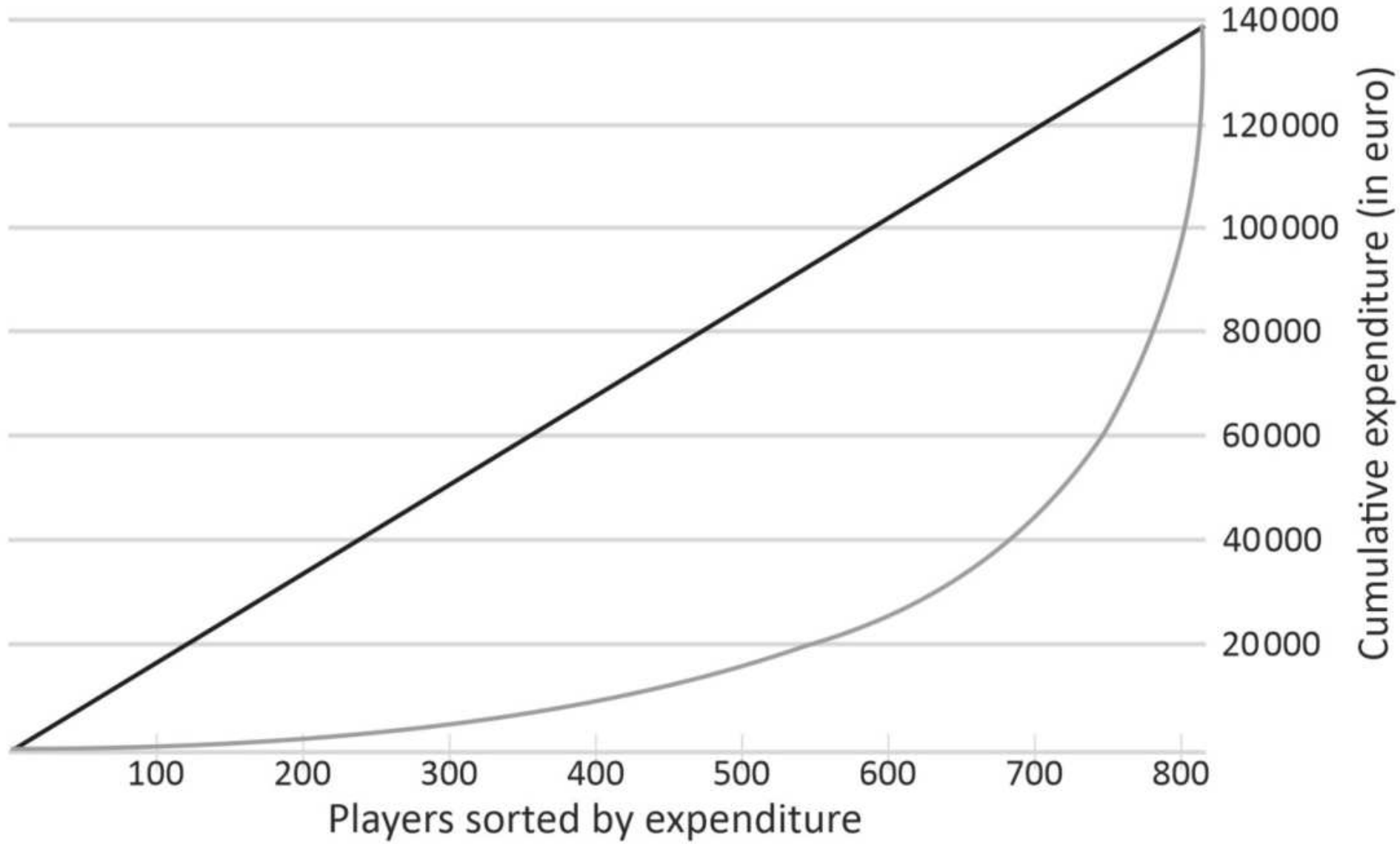
Instruments used:

- GDT (Pontes et al., 2021)
- BAGS (Stinchfield et al., 2017)
- FAS III (Torsheim et al., 2016)


Have you ever played a game where in-game purchases are possible? (n=2308)
Total
85
15
Female
77
23
Male
92
8
Gender-Variant/ Non-Conforming
91
9
10-12 years
83
17
13-14 years
84
16
15-16 years
86
14
17-19 years
85
15
0%
20%
40%
60%
80%
100%
Yes
No


Have you made any in-game purchases in the last 12 months? (n=1952)
Total
42
58
Female
21
79
Male
59
41
Gender-Variant/ Non-Conforming
52
48
10-12 years
42
58
13-14 years
44
56
15-16 years
43
57
17-19 years
36
64
0%
20%
40%
60%
80%
100%
Yes
No


How much money have you spent on in-game purchases in the last 12 months? (n=818)
Total
42
38
11
6
3
Ø 169,9 €
Female
54
32
9
3
2
Ø 101,8 €
Male
39
39
12
7
3
Ø 180,9 €
10-12 years
51
37
8
3
1
Ø 104,4 €
13-14 years
46
37
10
5
2
Ø 163,1 €
15-16 years
32
40
14
9
5
Ø 215,6 €
17-19 years
37
35
16
9
3
Ø 196,8 €
0%
20%
40%
60%
80%
100%
≤ 49 €
50-199 €
200-499 €
500-999 €
≥ 1000 €



Distribution of cumulative in-game purchase expenditures over the past 12 months;
n = 818 (adolescents who made in-game purchases in the past 12 months)

Heavy Spenders ("Whales")

Casual Spenders (n = 733)[1]		Heavy Spenders (n = 85)[1]	
Male	545 (74.3%)	Male	70 (82.3%)
Female	178 (24.3%)	Female	10 (11.8%)
Non-binary	10 (1.4%)	Non-binary	5 (5.9%)
Total	733 (100%)	Total	85 (100%)
10–12 years	188 (25.6%)	10–12 years	11 (12.9%)
13–14 years	226 (30.8%)	13–14 years	20 (23.5%)
15–16 years	213 (29.1%)	15–16 years	35 (41.2%)
17–19 years	106 (14.5%)	17–19 years	19 (22.4%)
Total	733 (100%)	Total	85(100%)
Gaming Disorder	31 (4.2%)	Gaming Disorder	12 (14.1%)
Gambling Disorder	17 (2.3%)	Gambling Disorder	15 (17.6%)

Distribution of the variables sex, age, gaming and gambling disorder for casual and heavy spenders

- Primary purchase motivations are 'to improve in the game' and 'because opening loot boxes is exciting'
- Influencers promoting pack openings and gambling are significantly more prominent
- *Valorant*, *CS:GO* and *Genshin Impact* are notably prominent

Hypotheses

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Spearman R (rs = .013, p = .700)

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H2: The occurrence of a video game disorder correlates with the amount of money spent on in-game purchases.

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Kruskal-Wallis ($H = 0.798$, $p = .671$)

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H2: The occurrence of a video game disorder correlates with the amount of money spent on in-game purchases.

Spearman R ($rS = .257$, $p < .001$)

Further results

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- Analogies to classic gambling: reporting wins, concealing losses, high event frequency, chasing

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"It already annoys me that I didn't get anything worthwhile for the money. Let's try it again; maybe it will improve, maybe I'll get something from a second pack to make the money back. You just want to somehow recover your loss, and eventually, you have such a high loss that you can't really make the money back anymore." (Jan, 17)

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- It is not so much the question, if in-game transactions are a gateway to gambling or other problematic behavior - they are problematic in themselves

Policy recommendations

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To increase the inhibition threshold:

- Allow the purchase of only one item at a time
- Implement a cooldown period after a purchase
- Apply KYC Policies
- Impose stricter regulations on minors' access to prepaid cards

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