

Does unit-dose packaging influence understanding of serving size information for cannabis edibles?

SAMANTHA GOODMAN, PhD¹ & DAVID HAMMOND, PhD¹

¹School of Public Health & Health Systems, University of Waterloo, Canada. samantha.goodman@uwaterloo.ca

BACKGROUND

Edible cannabis products have increased in popularity, particularly in jurisdictions that have legalized non-medical cannabis. Rates of adverse events from cannabis edibles have also increased, in part due to difficulties identifying and titrating THC levels in edible products. The current study tested whether packaging cannabis in separate units ('unit-dose' packaging) can enhance consumer understanding of serving sizes.

METHODS

An experimental task was conducted as part of the 2018 International Cannabis Policy Study online survey, recruited from the Nielsen Global Insights Consumer Panel. A total of 26,894 respondents aged 16-65 years from Canada and the USA were randomly assigned to view an image of cannabis brownie packaged according to 1 of 3 experimental conditions:

1. multi-serving edible ('control' condition);
2. single-serving edibles;
3. separately packaged single-serving edibles ('unit-dose packaging').

Participants were asked to identify a standard serving based on information on the product label. Logistic regression was used to test the influence of packaging condition on the likelihood of a correct response. Models were adjusted for key socio-demographic covariates (age, sex, visible minority status, education level, jurisdiction, self-reported THC knowledge, and past 12-month use of cannabis edibles). Adjusted odds ratios (AORs) are reported.

SAMPLE CHARACTERISTICS* (N=26,894)

Characteristic*	% (n)
Age (M, SD)	44.5 years (15.5)
Sex	
Female	61.5% (16,547)
Male	38.5% (10,347)
Education	
Less than high school	10.7% (2,865)
High school diploma or equivalent	15.2% (4,084)
Some college or technical training	36.0% (9,686)
Bachelor's degree or higher	38.1% (10,259)
Visible minority	
No	88.7% (23,878)
Yes	9.0% (2,426)
Unstated	2.2% (590)
Jurisdiction	
Canada	36.9% (9,933)
US 'illegal' states	35.7% (9,604)
US 'legal' states	27.4% (7,357)
Self-reported knowledge of amount of THC in a standard serving of an edible	
No/Don't know	93.8% (25,214)
Yes	6.2% (1,680)
Past 12-month edible cannabis use	
No	88.9% (23,898)
Yes	11.1% (2,996)

*No significant differences in demographics between the 3 experimental conditions ($p > 0.05$ for all).

RESULTS

"Based on the information provided, how much of the product should someone eat on one occasion if they want a standard serving?"



SOCIO-DEMOGRAPHICS

All tested socio-demographic variables were significantly associated with the outcome ($p < 0.001$ for all). The following groups were significantly more likely to identify the correct serving size: younger adults; females; those living in US states where recreational cannabis is legal; those with a bachelor's degree or higher; those not identifying as a visible minority; those reporting *not* knowing the amount of THC in a standard serving of a cannabis edible; and those who had consumed cannabis edibles in the past 12 months.

SUMMARY OF FINDINGS

Compared to the multi-serving edible 'control' condition in which a whole brownie had to be divided into servings, participants were significantly more likely to identify the correct serving size in the single-serving edible condition (55.3%) and the 'unit-dose packaging' condition (54.3%).

CONCLUSIONS

Packaging cannabis brownies such that each product 'unit' contained one dose of THC enhanced consumers' ability to identify how much of a product constitutes a standard serving, or 'dose'.

Packaging edibles as individual doses eliminates the need for mental math and could reduce the risk of accidental over-ingestion of cannabis.

DISCLOSURES

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