

participants' intended behavior towards people with mental health problems was maintained up to 10 months. Approximately 93% of workshop participants found the intervention useful and enjoyable. Collaborative creation of art made the subject of mental health interesting and relatable. Lack of support from college authorities, facilitator absenteeism and language barriers reduced participant engagement.

**Conclusions:** An arts-based educational program reduced mental-health-related stigma among youth in India in the short term. Minor adaptations to the program and a future, large-scale trial are proposed to assess its effectiveness.

**Sources of Support:** Wellcome-Trust Capacity Strengthening Award to PHFI-UKC for Doctoral Studies.

126.

#### ADOLESCENT PERCEPTIONS OF DIFFERENT E-CIGARETTE MARKETING CHARACTERISTICS IN RETAIL, ONLINE AND SOCIAL MEDIA

Shivani Mathur Gaiha<sup>1</sup>, Bonnie Halpern-Felsher<sup>1</sup>

<sup>1</sup>Stanford University.

**Purpose:** Nearly 4 million U.S. adolescents use e-cigarettes, despite known health harms and laws prohibiting sales to people below 21 years. National surveys show that adolescents self-report buying e-cigarettes from retail stores and online. Although studies show that e-cigarette marketing is associated with adolescent e-cigarette use, these studies have not directly asked adolescents their perception of whether e-cigarette marketing in retail, online and social media influences their browsing, purchasing and use-related behavior.

**Methods:** 90-minute, online focus groups with 14-19 year olds (May-Aug 2021). Photographs were used to help participants recall e-cigarette marketing. Participants were recruited through an Instagram post targeting 30 major U.S. cities (n=27 recruited in 3 focus groups from 10 cities thus far; recruitment ongoing). Thematic analysis was used to identify themes related to appealing marketing characteristics.

**Results:** In addition to bright colors of e-cigarette advertising and names of flavors, participants described appealing e-cigarette marketing characteristics. Appealing characteristics in retail stores: pricing coupons, free smelling samples, individual brands displayed in separate containers, displays at the checkout counter (e.g., "there's a big difference between being at the counter, where you can pick it up yourself, and being behind the counter because I don't want to have to ask the person at the Walgreens –'can you hand me that?"). On social media: AYAs were attracted by youth/influencers explaining product safety (e.g., "A lot of influencers market like 'Oh yeah, they don't have any cancer-causing chemicals'"); and inability to trace messages (e.g., Snapchat). Participants also listed ways to purchase e-cigarettes using gift cards, debit cards and using fake or other people's IDs.

**Conclusions:** Our data show that specific appealing e-cigarette marketing characteristics in retail stores and online can and should inform FDA, state, and local regulation. Notifications on social media, similar to those created to combat misinformation about COVID-19 vaccines, may be developed and tested to prevent AYAs from accessing e-cigarette-related misinformation.

**Sources of Support:** The research reported in this abstract was supported by the Taube Research Faculty Scholar Endowment and the ASPIRE D&I Pilot Award.

127.

#### ASSOCIATION BETWEEN ADOLESCENTS' PAST-30 DAY USE OF DIFFERENT SUBSTANCES AND DEPRESSION

Shivani Mathur Gaiha<sup>1</sup>, Bonnie Halpern-Felsher<sup>1</sup>

<sup>1</sup>Stanford University.

**Purpose:** Adolescents and young adults (AYAs) report that stress is a key reason for using different types of substances, including tobacco, alcohol and cannabis. However, since adolescents may have used a range of substances in the past 30 days, it is unknown as to whether the odds of depression are greater among those who used particular products. This study aims to assess whether use of some substances in the past 30 days is more likely associated with depression.

**Methods:** We conducted an online cross-sectional survey of 13-24 year olds in May 2020 (50:50 e-cigarette ever-users/never-users). We used a weighted ordered logistic regression to examine whether depression (Patient Health Questionnaire-2 scores >3) was associated with past 30-day use of 8 substances (cigarettes; e-cigarettes; little cigars, cigarillos and cigars; smoked marijuana; edible marijuana; blunts; alcohol; and hookah), including covariates of age, sex, LGBTQ, race/ethnicity and whether participants were complying with sheltering-in-place orders since staying at home may be correlated with feeling depressed.

**Results:** In our sample of 4,315 AYAs, 1,449 (33.6%) were depressed, including 442 13-17-year-olds, 937 females, 377 AYAs identifying as LGBTQ, 230 non-Hispanic African American/Black and 819 non-Hispanic Whites. Percentage of AYAs who were depressed out of the whole sample of 4,315 participants, by substance use status: 1) cigarettes: 839 never-users (19.4%), 262 used but not in the past 30 days (former users) (6.1%) and 327 past 30-day users (7.6%); 2) e-cigarettes: 585 never-users (13.5%), 355 former users (8.2%) and 509 past 30-day users (11.8%); 3) little cigars, cigarillos and cigars: 1,021 never-users (23.7%), 188 former users (4.3%) and 219 past 30-day users (5.1%); 4) smoked marijuana: 702 never-users (16.3%), 266 former users (6.1%) and 458 past 30-day users (10.6%); edible marijuana: 840 never-users (19.5%), 266 former users (6.1%) and 319 past 30-day users (7.4%); blunts: 810 never-users (18.8%), 481 former users (11.1%) and 131 past 30-day users (3.0%); alcohol: 400 never-users (9.3%), 341 former users (7.9%) and 691 past 30-day users (16.0%); and hookah: 1,006 never-users (23.3%), 201 former users (4.6%) and 219 past 30-day users (5.1%). In a model including past 30-day-use of eight substances, depression was more likely among those who used e-cigarettes in the past 30-days compared to never users (aOR=6.90, 1.74-27.38) and was less likely among non-Hispanic Asian American Pacific Islander (aOR=0.05, <0.01-0.97). Depression was not associated with past 30-day-use of any other substances or other sociodemographic factors in this model.

**Conclusions:** From a range of substances used by AYAs in the past 30 days, past 30-day-use of e-cigarettes was particularly associated with depression. Thus, while substance use issues should be co-investigated with depression, for e-cigarette cessation among past-30-day users mental health needs should be addressed.

**Sources of Support:** The research reported in this abstract was supported by the Taube Research Faculty Scholar Endowment to Bonnie Halpern-Felsher. Additional support was from grant U54 HL147127 from the National Heart, Lung, and Blood Institute (NHLBI) and the Food and Drug Administration Center for Tobacco Products.