

## RESEARCH POSTER PRESENTATION II: MENTAL HEALTH

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### VALIDATION OF THE ASK SUICIDE-SCREENING QUESTIONS (ASQ) AS A SUICIDE SCREENING TOOL FOR ADOLESCENTS IN THE OUTPATIENT POPULATION OF A TERTIARY HOSPITAL

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**Purpose:** Suicide is the second leading cause of death among people 15–29 years of age according to the 2014 Global Report on Preventing Suicide by the WHO. A short screening tool that is translated and validated is needed for early screening of adolescents at risk of suicide. This will be the first study to translate the ASQ or the Ask Suicide-Screening Questions, a 4-item suicide risk screening instrument, into Filipino and then validate it among Filipino adolescents. It will also look into the validity of the English version of the ASQ among Filipino adolescents. To date, no similar study has been done in the local setting.

**Methods:** This is a cross-sectional instrument validation study. The ASQ was translated into Filipino using internationally recommended standards. There were 215 adolescents included in the study. The subjects were randomly assigned to answer either the English ASQ or the Filipino ASQ. They were also asked to answer the PHQ-9.

**Results:** Item-level content validity index (I-CVI) was computed using the proportion of experts who agree that the item is quite or highly relevant. An I-CVI of 0.80 means that 80% of the experts felt that the item was either quite or highly relevant. With each of the items having an I-CVI exceeding 0.80, the experts deemed the Filipino ASQ to have adequate content validity. Descriptive statistics was used to summarize the feedback of the patients regarding the questionnaire. For concurrent validity, the point-biserial correlation between the ASQ items and PHQ-9 were computed, which showed weak concurrent validity. Confirmatory factor analysis (CFA) was done to determine the construct validity of the questionnaire. Absolute fit indexes such as chi-square goodness of fit, root mean square error of approximation, and standardized root mean square residual were calculated. The CFA turned out to be acceptable. For internal consistency, the overall Kuder Richardson coefficient of reliability for the final ASQ was 0.366. A higher coefficient was found in the English version (KR20 at 0.531) as compared to the Filipino version (KR20 at -0.056). Majority of subjects were in the 12–14 yrs with slight preponderance of females and forty five percent (45%) had medical problems. The median PHQ-9 was zero.

**Conclusions:** The Filipino version of the ASQ had acceptable content and face validity, CFA was a good fit, construct validity was acceptable. However, the ASQ had weak concurrent validity against the PHQ-9 and internal consistency was low which may be due to inconsistencies in answering, interpretation of terms and the nature of the construct of interest which was suicide. Despite these limitations,

the results suggest that the Filipino ASQ has a potential to be a viable tool to assist health care workers in screening for suicide among adolescents. Our effort to validate the ASQ is a useful step in this direction. We believe this study will encourage additional interests on mental health and suicide research among Filipino adolescents.

**Sources of Support:** Self-funded.

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### EVALUATION OF AN ARTS-BASED EDUCATIONAL PROGRAM TO REDUCE MENTAL-HEALTH-RELATED STIGMA AMONG ADOLESCENTS IN INDIA

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**Purpose:** Youth avoid seeking help for mental health problems due to mental-health-related stigma. Unlike high income countries, limited studies assess the impact of arts-based educational interventions on reducing such stigma among youth in low- and middle-income countries. A mixed methods, pre-post control group study was conducted (July 2016 - October 2017) to evaluate a six-week, arts-based educational program aimed to reduce mental-health-related stigma among youth in India.

**Methods:** An arts-based educational program was developed based on health communication theories, a pilot intervention, a theory of change workshop with youth and two systematic reviews on mental-health-related stigma among youth. This program was delivered in four public and private colleges in Hyderabad, India in partnership with a community-based organization, artists and mental health counsellors. The main outcome related to reduced stigma was measured using the Reported and Intended Behavior Scale (a composite measure of self-reported willingness to live with, work with, live nearby or continue a relationship with someone having a mental health problem). A higher score indicates lower stigma and more favorable intended behavior towards people living with mental health problems. Participant responses were measured at baseline and post-intervention after six weeks. Intervention feasibility and acceptability was assessed through weekly feedback forms and focus group discussions with participants. We assessed whether outcome measures differed from pre- to post- among the groups using multi-level mixed-effects regression models clustered on the school level and adjusting for relevant confounders.

**Results:** The study involved a total of 432 participants in three groups: participants creating art on the theme of mental-health-related stigma (n=123), a student audience attending an art show by participants (n=244) and a control group (n=65). We collected 745 feedback forms from participants creating art after every session. Between baseline and post-test, workshop participants showed significantly more favorable intended behavior towards people with mental health problems than members of the control group (coefficient=1.55, 95%CI 0.06–3.04, p=0.041). Improvement in workshop

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.

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

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**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.

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

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**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.

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