Running head: EVALUATION OF A SOCIAL MEDIA CAMPAIGN

Abstract

Mental health (MH) stigma affects help seeking behaviors of youth, particularly youth of color. This paper reports the impact of Look Around (LA), a social media campaign designed to reduce MH stigma and increase help seeking in 6th-12th grade youth in one Midwestern county. The campaign utilized movie theater advertising, social media, web-based advertising, and school-based media/events over a school year. Using a pre-posttest survey research design with 11,478 6th-12th grade students in a Midwestern county, we used paired *t*-tests to examine pre to posttest changes in survey items addressing MH stigma and help seeking attitudes. We then used a regression model to examine change by racial subgroup on a composite of all the items. Lastly, we used an independent *t*-test to examine differences between high change youth and low change youth on academic performance, attendance, discipline, and MH screening scores. Posttest improvements in the stigma and help-seeking for all youth were observed, but controlling for all covariates (grade level, gender, etc.) youth of color reported lower levels of change compared to white youth. Social media campaigns are useful in addressing MH stigma and help seeking, but messaging may need to attend to the cultural characteristics of all youth.

Keywords: stigma, help seeking, mental health, social media

Mental health (MH) stigma is a barrier to the prevention, detection, and treatment of MH conditions (Corrigan, Druss, & Perlick, 2014). Stigma, as it relates to MH, is a multi-dimensional concept that encompasses negative attitudes, discrimination, and a desire for social distance from anyone with a mental illness (Corrigan et al, 2014). Awareness and stigma are inversely correlated; when public awareness of a health concern is low, stigma for that condition is high (Lincoln, Arens, Berger, & Rief, 2008). Probably the greatest repercussion of MH stigma is the impact on help seeking. Persons struggling with MH related symptoms are less likely to seek help if they perceive their condition is stigmatized (Gulliver, Griffiths, Christensen, 2012) and this has negative consequences for academic and behavioral performance at school. This concern increases for youth of color particularly in light of the achievement gap (McGuire & Miranda, 2008). Some studies estimate 6% of African American youth, for example, access MH supports even though these youth represent 14% of the population (Pires et al., 2013). The disparities make early prevention and intervention imperative as youth of color manage daily life and school while coping with ongoing stressors stemming from poverty and systemic racism.

Due to availability and effectiveness, media outlets have long been a tool of public health efforts. A list of studies on Triple P, for example, show the universal media campaign extolling parenting information promotes the use of positive parenting strategies (Sanders, 2012; https://www.triplep.net/glo-en/home/). California, conversely, stigmatized smoking behavior through social media (e.g., Instagram, Facebook, Twitter, TV, radio, and billboards) with time series analyses revealing youth tobacco sales significantly declined over time (Hu, Sung & Keeler, 1995). More recently, social media strategies have been used to reduce MH stigma and increase help seeking behaviors of youth. A host of studies suggest social media campaigns targeting MH awareness, stigma, and help seeking are effective at improving awareness and

attitudes towards MH (Livingston, Cianfrone, Korf-Uzan, & Coniglio, 2014; Wright, McGorry, Harris, Jorm, & Pennell, 2006). Studies examining racial differences regarding the effects of social media on attitudes and behaviors of youth indicate the effects of social media have greater impact for White youth attitudes and behavioral health compared to youth of color (Gibbons, Pomery, Gerrard et al., 2010; Tanski, Stoolmiller, Gerrard & Sargent, 2012). This brief report examines the one-year impact of the Look Around (LA; https://www.lookaroundboone.org/) campaign on youth MH stigma and help seeking. LA is a community-wide campaign to create a social message brand with the goal of improving MH stigma and help-seeking among youth in Grades 6-12 in a Midwestern county. This study examined three evaluation questions:

1. Did significant change occur in stigma and help seeking behavior in the sample overall?
2. Did the sample, factored by race, reveal differences in the size of the changes?
3. Did students with above average change, compared to those with below average change, differ in attendance, achievement, MH screening scores, office referrals or suspensions?

Method

Sample and Setting

Data were collected from students in grades 6-12 in 12 middle and 10 high schools in a suburban-rural Midwestern county. Table 1 reports the demographic characteristics of the 11,478 students in grades 6-12 who participated in the study—5,120 (40.9%) attended one of 12 middle schools and 6,445 (51.5%) of the students attended one of 10 high schools. Comparisons of the sample data to the census population parameters revealed that the study sample did not differ from county wide population estimates with regard to sex, income, or race.

Design

The study utilized a single group, pre and posttest survey design. All 6-12th grade youth in the county participated in the school-based survey in the fall of 2017 and again, following the rollout of the LA campaign, in the spring of 2018 survey.

Community Participation in Design and Implementation of LA

Based on a community needs assessment, the county's 2014-2018 health improvement plan identified youth behavioral health as a top priority and the LA campaign emerged as a key strategy. The LA campaign was designed to reduce stigma and increase help seeking for MH related conditions. The campaign content was developed in partnership with leaders from schools, community MH providers, researchers, and students. Later, as the content was rolled into the community, additional LA content included artwork and messaging created by community youth. LA messaging was promoted through school-based (posters, art contests, counseling curricula, written communications with educators and parents/caregivers) and community efforts (social media, radio, movie theatre spots). The LA campaign reached 23,271 K-12 students and 26,997 parents/caregivers, for a total of 50,268 individuals (see Table 2).

Measures

MH stigma and help seeking. MH stigma and help seeking was measured using four items rated by youth on a three-point Likert-type scale (0 = *never* to 3 = *always*) asking students: "*It is okay if someone has a problem with their MH*," "*People just like me can have a problem with their MH*, "*If I had a MH problem I would ask for help*," and "*There is an adult I can talk to at school if I need help*." Items were analyzed independently and as a single reliable composite ($\alpha = .88$). These items were administered at the same time as the Early Identification System (EIS) universal screener mentioned below.

MH risk. The EIS (Huang, et al., 2019; Reinke, et al., 2018; Thompson, et al., 2017) includes a youth and teacher version. The youth version includes 27 MH risk items rated on a three-point Likert-type scale (0 = *never*, 1 = *sometimes*, 2 = *often*, 3 = *always*). These items collapse into seven unique MH risk subscales: Externalizing, Internalizing, Peer Relationship Problems, Attention and Academic Issues, Emotion Dysregulation, Relational Aggression and School Disengagement. The teacher version rates 32 items using a yes or no response format. Both teacher and student EIS scales have subscale and total risk scores with adequate construct and predictive validity as well as inter-item reliability (α = .71-86; Huang et al., 2019).

Student and school factors. School records provided student demographics as well as attendance rates, academic achievement and grades, and office disciplinary referral data.

Analysis

First, to examine changes in self-reported MH stigma and help seeking attitudes, we used paired *t*-tests to compare pre and posttest sample averages on the four survey items measuring MH stigma and help seeking. The tests were appraised at a probability value of a .05 with a Bonferroni corrected probability value (i.e., $p<.05/4$). Second, to examine whether changes in stigma and help seeking were different for student racial groups, we combined the four items into a single composite and factored the sample by race/ethnicity with white students as a comparison group. We then simultaneously regressed all race factors on the posttest composite stigma and help seeking scores while controlling for student characteristics and pretest scores. Lastly, to examine the differences between student groups with high amounts of change and low amounts of change, we partitioned the sample into above and below average amounts of pre to posttest change in the stigma and help seeking composite and compared them using a two-tailed independent *t*-test to determine if there were any differences in MH risk or school factors.

Missing data. The total sample included in the present analyses included approximately 77% of all 6-12th grade students with 2,647 students (23%) with some missing data excluded from the final models. Analysis of missing data patterns revealed no significant associations existed between response patterns and respondent characteristics (i.e., sex, race, grade, lunch participation, school of attendance, MH screening scores). Furthermore, those with missing data did not differ from those with full data on demographics.

Results

Regarding the overall effect of the LA campaign on all student responses to each survey item gauging student stigma and help seeking, there were significant overall improvements in student stigma and help seeking attitudes. Paired *t*-tests revealed significant pre to posttest change in all survey item scores examining stigma attitudes, "*It is okay if someone has a problem with their MH*." (*N*=8,831; *t*=5.22; *s.d.*=.85; 95%*CI*=.03-.06; *p*<.001 *d* = .45); and "*People like me can have a problem with their MH*," (*N*=8,831; *t*=5.02; *s.d.*=.93; 95%*CI*=.07-.03; *p*<.001 *d* = .53)—a mild to moderate average improvement of .45 and .53 of a standard deviation for the average person in the sample, respectively (Cohen, 1980). Likewise, analyses revealed significantly higher post-test versus pre-test scores on the survey items tapping help seeking, "*There is an adult I can talk to at school if I need help*" (*N*=8,831; *t*=26.41; *s.d.*=.95; 95%*CI*=.03-.06; *p*<.001 *d* = .78); and "*If I had a personal or MH problem I would ask for help*," (*N*=8,831; *t*=4.22; *s.d.*=.65; 95%*CI*=.03-.06; *p*<.001; *d* = .35), an improvement of .78 and .35 of a standard deviation for the average person in the sample, respectively (Cohen, 1980)

The coefficients of a regression model examining whether different student racial subgroups had different pre to posttest changes in the composite stigma and help seeking scores are displayed in Table 3. The results of the model suggest a differential effect of change from pre

to posttest attitudes surrounding stigma and help seeking for African American youth compared to all other racial categories and with white youth used as a reference category (*SS*=214.448; *df*=10; *F*=153.517, *p*=.001). Figure 1 shows mean pre and posttest ratings by race. As shown in the figure and confirmed by the results of an independent t-test, African American students (*n*=987; *d*=.07) compared to all other student racial groups (*n*=7254, *d*=.12) appear to have demonstrated significantly less change from pre to posttest in stigma and help seeking attitudes (*N*=8,241; *t*=2.75, *s.d.*=.015; 95%*CI*=.003-.057, df = 8,239, p = .001).

Lastly, post hoc analyses used independent *t*-tests to examine if there were any significant differences between students with above average change versus below average change in the stigma and help seeking composite on school or other student level factors (i.e., attendance, achievement, grades, MH screening scores, office referral rates, and suspension and expulsions for serious disciplinary actions). Results revealed some differences in these comparisons, with students who demonstrated below average change in stigma and help seeking from pre to posttest also having significantly greater self-reported MH risk (*N*=8,831; *x*=4.67, *sd*=2.9, *t*=-2.91, *p*=.003) and teacher rated MH risk (*N*=8,831; *x*=3.08, *sd*=5.77, *t*=-3.49, *p*=.001) at baseline compared to those with above average changes from pre to posttest. No differences were observed for the other school and student level factors.

Discussion

The present study evaluated the LA program—a social media campaign in one Midwestern county targeting MH stigma and help seeking attitudes in youth in grades 6-12. Using a pre and posttest survey of 77% of 6^{th} -12^{th} grade youth, analyses show the campaign was associated with improvements in student responses to items surveying stigma and help seeking behaviors. Additional analysis suggested these changes varied by a function of race with African

American youth experiencing less overall change compared to others. Lastly, students with below average change scores from pre to post on the stigma and help seeking composite score, compared to those with above average change scores had greater self and teacher reported MH risk scores.

The present study findings are similar to those observed in prior studies of public health messaging campaigns to alter attitudes (Flay, 1997; Hu et al., 1995) though it is hard to determine whether these changes in attitudes translate into behavioral changes in the current study. The study has obvious limitations to note. First although the study included the pre and posttest responses of a majority of youth targeted in the campaign, this evaluation lacks a control or comparison group. Future studies could increase the rigor of evaluation efforts by utilizing a comparison county similar to the implementation sample frame or by using other advanced methods like propensity score methods to draw comparisons. Because there is not a control condition in the present study, the findings summarized here are subject to a host of internal threats to study design, particularly historical events (e.g., increased national attention and awareness of *#me too*, *Black Lives Matter*, racial stereotyping and bias testing, and increased adoption of Mental Health First Aid [Swarbrick & Brown, 2013], etc.). In addition to internal design concerns, there could be testing threats to the findings here as students completed the outcome questions three times through the same school year, thus exposed to the same assessment items repeatedly. Further, while the stigma and help seeking items test-retest correlations suggest the items perform consistently, and because the intent of the EIS and the related scales are to be used as a screening tool, the multidimensionality of stigma, help seeking, and MH risk is not fully represented by the measures here. Future studies should use scales that better capture the multifaceted nature of stigma (i.e., cultural differences, gender/sex differences,

etc.) and other relative measures that affect stigma (e.g., exposure to MH diagnoses, training experiences, student diagnoses, access to care). Such refined measurement of complex concepts will better isolate the impact of messaging campaigns. Lastly, other indicators of help seeking might be useful to consider for future research such as referral numbers to school counselors.

Regardless of the threats to internal validity, there are practice, policy and research implications here. Regarding practice, the study findings reveal more effort needs to occur to increase educator and youth awareness of the signs and symptoms of youth MH struggles, including whether these signs and symptoms differ culturally and racially. That African American youth responded differently to the LA campaign indicates some culturally different messaging and attitudes surrounding MH messages may improve stigma and help seeking among all youth. This issue is compounded by the fact that nearly 80% of teachers in US public schools are from white and middle class backgrounds. We have begun integrating diverse voices in the campaign and involving more youth of color by engaging those youth in focus groups to provide feedback on the campaign materials and messaging. Please view current examples of the LA campaign's effort here: https://www.lookaroundboone.org/. Training and effective practice and policy advances regarding school discipline policy should also be taken into account to prevent treating MH signs and symptoms as challenging behaviors. That is, we need to be better at identifying when youth are experiencing symptoms of MH problems and respond in supportive and thoughtful ways instead of simply following progressive disciplinary policies, particularly when it comes to supporting youth of color. Lastly, while there was some amount of missing data from pre to posttest (see Table 1), and analyses did not suggest any differences between youth with full data and those with patterns of missing data with regard to demographics, we believe these missing data need to be taken into account when interpreting these outcomes as they could

affect the accuracy of the estimates. For example, those who may be at higher risk or more likely to hold onto stigmatizing beliefs could potentially not be represented in these data, but it is impossible to know with this preliminary evaluation.

Regarding policy implications, more effort needs to be included in educational programs and funding for public messaging to reduce the stigma surrounding MH and increase not only the willingness to seek help but also the opportunities to access services. Access to MH services is adversely impacted by a number of barriers (e.g., transportation, cost, cultural attitudes, etc.) and more effort should be made to reduce these barriers. Reliance on cost effective public messaging campaigns such as LA can have a desirable impact on youth attitudes (Hu et al., 2008; Flay, 1987). As for the field of school psychology, being aware of effective messaging utilized to facilitate help seeking could assist in universal prevention efforts within a school or a district. These efforts could be replicated with success easily and with very little cost in the form of daily briefings for students, using posters, swag or free materials, and working with staff and students to not only celebrate difference but also to normalize MH conditions. Efforts could also include student art contests to generate materials and also directly engage students in the efforts to combat stigma at school.

Lastly, greater effort must be made to harness technology to better understand the impact of these types of campaigns. While we can use social media statistics (views, number of youth, number of seats in a movie theatre, etc.) to approximate the number of consumers, it is hard to know if each viewing is unique. With cell phones, geo-fencing, and the ability to track user data—we can now better understand the relationship between exposure and changes in attitudes—but the ultimate goal is to influence people who are struggling to seek help and to be sure that the help they receive is evidence-based and effective.

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Table 1. Sample characteristics of 6-12th grade students and missingness

Variable	N	Valid %	Missing n (%)*
Sex	**11,478**	**91.7**	**1,034 (8.3)**
Female	5,614	51.1	
Male	5,864	48.9	
Race/Ethnicity	**11,484**	**91.8**	**1,028 (8.2)**
European American (White)	8,107	70.6	
African American	1,773	15.4	
Asian American	459	4.0	
Hispanic/Latina-o	509	4.4	
American Indian	43	.4	
Multi-Racial American	572	5.0	
Pacific Island American	21	.2	
Grade	**11,478**	**100**	**0 (0)**
6th	1,870	14.9	
7th	1,887	15.1	
8th	1,869	14.9	
9th	1,803	14.4	
10th	1,750	14.0	
11th	1,654	13.2	
12th	1,688	13.5	
Free & Reduced Lunch	**11,478**	**91.7**	**1,038 (8.3)**
Yes	4,120	35.9	
No	7,354	64.1	

Notes. Missing n and % based upon the total sample of 12,512

Table 2. Total number of youth reached via each LA implementation strategy

Platform	Number of Users Reached
Web-based advertisement (Google Adwords)	337,892 (duplicated)
Social Media	16,141 (unduplicated)
Geoframed web-based advertisement	44,282 (duplicated)
Movie theatre advertisement	253,892 (duplicated)

*Note. Duplicated refers to the counts potentially representing multiple counts of access by the same users. Unduplicated represents counts of unique users.

Table 3. Unstandardized coefficients, standard errors, and test values for posttest differences in stigma and help seeking (*N*=11,478)

Factor	*B*	*SE*	t (p-value)
Intercept	1.47	.03	50.23 (.00)
Stigma/Help Seeking Pretest	.35	.01	33.57 (.00)
AfAm	**-.61**	**.01**	**-4.33 (.00)**
HLatAm	-.11	.02	-0.52 (.61)
MxAm	-.26	.02	-1.35 (.18)
AsAm	-.01	.02	-0.27 (.79)
Sex	**-.64**	**.06**	**-.7.69 (.00)**
FRL	**-.57**	**.01**	**-5.74 (.00)**
SPED	**-.004**	**.01**	**-3.74 (.00)**
Grade	-.05	.01	-0.33 (.81)
School	-.01	.02	-0.01 (.93)
R^2	.16		
R^2 adjusted	.16		

Note. AfAm = African American; HLatAm = Hispanic Latina-o American; MxAm=Mixed Race American; AsAm = Asian American; FRL=Free and Reduced Lunch; SPED=Special Education Status.

Figure 1. Pre and posttest scores by race on Stigma/help seeking