



Mental Health Stigma Reduction in the Midwestern United States: Evidence from a Digital Campaign Using a Collective Impact Model

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Abstract

Addressing mental stigma is a key component of improving mental health outcomes. A digital media campaign was implemented to reduce mental health stigma in the Omaha Metropolitan area. The campaign used evidence-based approaches within a collective impact framework. Two surveys were conducted at baseline and at 10-month follow-up to evaluate the campaign within the Omaha and Council Bluffs intervention region, and a control region in Iowa. Analysis revealed significant improvements in desires for social distance and perceptions toward treatment efficacy within the intervention group. Improvements were seen across measures of personal and community attitudes towards mental health conditions, confidence in supporting others, and likelihood of disclosing a mental health condition. The trends were generally not replicated within the control group. Respondents who were aware of the campaign showed fewer stigmatizing views, including lower desires for social distance, improved attitudes toward treatment, and significant improvements in providing support and caring for their own mental health. The results suggest that the implemented evidenced-based approach could potentially create positive shifts in stigma reduction. This evaluation further supports the potential for scaling and adapting digital media campaigns for stigma reduction in different geographic locations.

Keywords Mental health stigma · Digital media campaigns · Collective impact · Health communications

Introduction

Over 51 million people in the United States live with a mental health condition or disorder [1]. Conditions such as depression, anxiety, schizophrenia, and bipolar disorder have become increasingly prevalent in the United States, particularly since the beginning of the COVID-19 pandemic [2–5]. In the midwestern United States (U.S.), 27% of adults have reported symptoms of anxiety or depression during the pandemic, and 30% of parents have reported worsening mental health symptoms [6, 7]. In Nebraska and Iowa in particular,

mental health conditions have risen since the beginning of the pandemic: as of July 2021, 25% of adults in both states have reported symptoms of anxiety or depression [8]. The COVID-19 pandemic has also worsened and created new barriers to accessing mental health care services. For many, job losses during the pandemic have led to a loss of income or health insurance, and there has been limited access to care due to the shortage of mental health professionals [9]. These issues may be particularly challenging for individuals in Nebraska and Iowa, which had only 51.0% and 35.2% of their psychiatric needs met pre-pandemic, respectively [8].

Due to these increases in mental health issues, compounded with increasing barriers to mental health care, it is critical to reduce mental health stigma [10]. Mental health stigma produces negative beliefs and attitudes that affect the way people with mental health conditions are perceived by others. Stigma is often a barrier to receiving mental health care and is associated with a decrease in seeking and sustaining treatment as well as an increase in treatment drop-out [11–13]. Media campaigns are often one component of efforts to reduce stigma. Given that social media has been

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shown to perpetuate negative stereotypes about mental health, it can be an ideal channel for stigma reduction message dissemination [14, 15]. Digital media approaches allow for flexibility and scalability and have shown promise in reducing stigma, though there is a need for more information on how to apply lessons learned to different contexts [16–18]. A variety of intervention approaches have been attempted to reduce mental health stigma, with varying degrees of success for each. Researchers have generally separated stigma reduction strategies into four main categories. (1) Education-based programs address knowledge gaps about mental health stigma and dispel rumors and stereotypes [19, 20]. (2) Contact-based programs facilitate positive interaction and connection between people with and without mental health conditions to overcome negative attitudes or beliefs due to lack of contact [19, 21, 22]. Peers can play an integral role in contact-based programs to reduce stigma, because they can act as inspirational figures and role models for mental health condition management and long-term recovery [20, 23, 24]. (3) Advocacy programs include letter writing campaigns, protesting, and reaching out to policy makers [25]. (4) Policy-based strategies are often embedded within legislative change programs, which aim to impact policy decisions at the local, state, and or national level [21].

In 2019, PGP (The Public Good Projects) published an evaluation of Action Minded, a national campaign to reduce mental health stigma [18]. Action Minded used three complementary digital campaigns designed to address stigma using a combination of education-, contact-, and advocacy-based strategies delivered through a digital media campaign. Each of the three digital campaigns used in Action Minded were integrated with one another, with complementary calls-to-action for differing levels of engagement. The education-based and contact-based strategies for Action Minded relied on user-generated images and videos, which were paired with stigma reduction messaging, while the advocacy-focused strategy aimed to create a movement of advocates in the digital space. Campaign message themes changed month by month, starting with the basics and building knowledge incrementally and themes applied to content across each of the campaigns. The campaigns were complemented by a community engagement aspect, designed to strengthen and leverage existing partnerships among organizations working on mental health. An evaluation of Action Minded showed significant improvements across key stigma-reduction metrics [18].

To understand whether the Action Minded model could be expanded/adapted to another geographic location, PGP and a local community organization The Wellbeing Partners (TWP) implemented digital mental health stigma reduction campaigns across four priority counties located in the Greater Omaha, Nebraska and Council Bluffs, Iowa metropolitan area. Spokesimals Midwest (spokesimalsmidwest.

com) and WhatMakesUs (whatmakesus.com) both used user-generated content delivered through social media to address mental health stigma among the general public. Spokesimals Midwest paired educational mental health messages with images of pets as a way of reaching those who may not be interested in a typical “mental health campaign.” WhatMakesUs featured personal testimonials from individuals with mental health conditions and mental health allies, to increase feelings of commonality between those with and without mental health conditions. Campaigns were delivered using the collective impact model as an underlying framework, which involved close collaboration between PGP and TWP, as well as a diverse group of community-based organizations and stakeholders who helped to guide the campaigns and ensure that the project was connected to the community and building upon work already being done in the area. See Supplementary File 1 for more information on how the collective impact model was applied. Detailed information has been published elsewhere about the campaign methods and creation [26]. The goal of the present study is to evaluate the potential impact of the campaign.

Methods

Survey Evaluation

Two cross-sectional online surveys were conducted within intervention counties of the Greater Omaha-Council Bluffs metropolitan area (Douglas County, Cass County, and Sarpy County in Nebraska and Pottawattamie County in Iowa) as well as control counties in Iowa (Dallas County, Linn County, and Polk County). Baseline data were collected pre-campaign implementation from June 4 to July 20, 2020. The follow-up survey was conducted after 10 months of active campaign implementation, from May 16 to May 26, 2021. The baseline surveys were conducted through the survey panel company Qualtrics and follow-up surveys were conducted through Ipsos panels. All research activities were reviewed by an Institutional Review Board and determined to be exempt from review.

The survey instrument utilized and adapted existing validated measures of knowledge, attitudes, and reported and intended behaviors [18, 27, 28] and consisted of questions that were created to align with specific messaging used in campaign content. Messaging fell into six main message frames, including: (1) Supporting others: Tips for supporting loved ones; (2) Recovery: People with mental health conditions can improve with treatment; (3) Social distance: Openness to interact with someone with a mental health condition; (4) Addressing stereotypes: People with mental health conditions are not more dangerous/unreliable/at fault for their disease; (5) Treatment: Therapy, counseling,

and medications can effectively manage mental health issues and (6) Self-stigma: Encourage self-care to support own mental health. See Supplementary File 2 for sample images of messages that reflect the constructs included in content and measured in evaluation questions. Questions from the baseline and follow-up surveys were identical to compare changes over time, with additional questions added at follow-up to assess campaign awareness. Eligibility criteria included English or Spanish-speaking, being a resident of Nebraska (counties of Saunders, Cass, Sarpy, Douglas, Washington) or Iowa (counties of Harrison, Pottawattamie, Mills, Dallas, Linn, and Polk) and being within the ages of 18–65. Participants were allowed to opt out of or quit a survey at any time. All participants provided electronic consent to participate before taking the survey. Campaign awareness was assessed at follow-up by asking respondents if they had either heard of the Spokesimals Midwest or WhatMakesUs campaigns by name or seen examples of posts from the campaigns on social media.

Survey results were analyzed using IBM SPSS Statistics and R Studio quantitative statistical software. Although education- and contact-based techniques are distinct stigma reduction strategies, campaigns were analyzed together in order to understand the impact of the model as a whole. For analysis comparing results over time, weighting was applied to baseline data in intervention and control regions to match their respective gender and age distributions at follow-up. After demographic characteristics were tabulated, a two-sided Pearson Chi-square test with an alpha of 5% was used to test differences for variables of interest between baseline and follow-up, as well as differences between those who reported campaign awareness and those who did not at follow-up. Within those aware of the campaign, there was a significantly higher proportion of respondents with a self-reported history of a mental health condition, compared to those not aware of the campaign ($p < 0.001$). However, additional analysis was undertaken to confirm that all trends held true for the campaign aware group when stratified by mental health status.

Results

Evaluation Survey

A total of 466 respondents completed the baseline survey, and 402 respondents completed the follow-up survey. Demographics were similar between the 2 years, except for significant differences in gender and age in both the intervention and control groups across time points (Table 1). The samples at both baseline and follow-up generally mirrored demographic characteristics of each region [29]. To generate more representative estimates, survey data presented in

Tables 2 and 3 reflect baseline data that was weighted by gender and age.

Baseline to Follow-Up Analysis

Respondents were asked questions to assess desired levels of social distance from someone with a mental health condition (Table 2). From baseline to follow-up, respondents in intervention counties reported significant improvements in their willingness to live with ($p = 0.001$) and work with ($p = 0.000$) someone with a mental health condition, as well as non-significant increases in willingness to live nearby ($p = 0.333$) and continue a relationship with someone with a mental health condition ($p = 0.147$). In comparison, respondents in control counties showed non-significant decreases in willingness to live with ($p = 0.583$) and work with someone with a mental health condition ($p = 0.720$), a significant decrease in willingness to continue a relationship with someone with a mental health condition ($p = 0.019$), and a non-significant increase in willingness live nearby someone with a mental health condition ($p = 0.407$).

Questions also assessed attitudes toward mental health (Table 3). Treatment and recovery beliefs improved in the intervention region, including a significant increase in agreement that medication can be an effective treatment for people with mental health conditions ($p = 0.001$); while a significant decrease was observed in the control group ($p = 0.001$). Similar trends were observed with a non-significant increase in the perception of therapy and counseling as an effective treatment in the intervention region ($p = 0.558$), while the control group showed a significant decrease in agreement ($p = 0.019$). The intervention region also showed improvements in agreement that most people would accept someone who has recovered from a mental health condition as a children's teacher ($p = 0.146$). The control region showed a non-significant decrease ($p = 0.896$). At baseline, a lower proportion of respondents in the intervention region reported taking recent steps to improve their mental health compared to respondents in the control region. However, the intervention group reported higher rates at follow-up ($p = 0.349$), with almost no change seen for controls ($p = 0.945$).

Follow-Up Analysis: Campaign Awareness

To assess campaign impact, a sub-analysis was performed at the follow-up survey between respondents who reported campaign awareness and those who did not (Table 4). Analysis revealed that 30.0% of respondents within the intervention group reported campaign awareness at follow-up. Significantly more campaign aware respondents have taken steps to improve their mental health in the past 6 months, compared to those not aware of the campaign ($p = 0.002$). A significantly higher proportion of campaign

Table 1 Unweighted demographics, baseline versus follow-up

	Intervention		Control	
	Baseline N = 246	Follow-up N = 230	Baseline N = 220	Follow-up N = 172
Age group				
18–24	20.7% (51)	9.6% (22)	20.0% (44)	9.9% (17)
25–34	21.1% (52)	27.0% (62)	23.6% (52)	27.9% (48)
35–44	25.6% (63)	28.3% (65)	19.5% (43)	25.6% (44)
45–54	17.5% (43)	12.6% (29)	16.8% (37)	16.9% (29)
55+	15.0% (37)	22.6% (52)	20.0% (44)	19.8% (34)
Gender				
Male	26.0% (64)	42.6% (98)	57.7% (127)	39.0% (67)
Female	72.8% (179)	55.7% (128)	41.8% (92)	59.9% (103)
Other nonconforming	0.8% (2)	1.3% (3)	0.0% (0)	0.6% (1)
Prefer to not say	0.4% (1)	0.4% (1)	0.5% (1)	0.6% (1)
Ethnicity				
Hispanic/Latino	11.4% (28)	9.1% (21)	7.7% (17)	6.4% (11)
Race				
White	82.1% (202)	85.2% (196)	83.6% (184)	84.9% (146)
African American/Black	10.6% (26)	7.4% (17)	6.8% (15)	7.6% (13)
Asian	2.8% (7)	3.0% (7)	6.4% (14)	2.3% (4)
American Indian/Native Alaskan	3.3% (8)	3.5% (8)	2.3% (5)	3.5% (6)
Hawaiian/Pacific Islander	0.4% (1)	0% (0)	0.5% (1)	0.6% (1)
Other	2.8% (7)	1.7% (4)	3.2% (7)	2.3% (4)
Education				
Less than high school	1.2% (3)	3.5% (8)	1.4% (3)	1.2% (2)
High school graduate or GED	18.3% (45)	18.7% (43)	15.5% (34)	26.7% (46)
Some college	24.0% (59)	27.8% (64)	19.1% (42)	26.2% (45)
Associate's degree	11.0% (27)	10.4% (24)	13.2 (29)	13.4% (23)
Bachelor's degree	31.7% (78)	26.1% (60)	42.3% (93)	25.0% (43)
Ph.D., graduate or professional degree	13.0% (32)	13.0% (30)	8.6% (19)	7.0% (12)
Don't know/prefer to not say	0.8% (2)	0.4% (1)	0.0% (0)	0.6% (1)

Table 2 Measures of social distance, intervention vs control, from baseline to follow-up

	Intervention			Control		
	Baseline N = 245*	Follow-up N = 230	p value	Baseline N = 211*	Follow-up N = 172	p value
In the future, I would be willing to live with someone with a mental health condition	55.1% (135)	68.7% (158)	0.001	71.1% (150)	69.8% (120)	0.583
In the future, I would be willing to work with someone with a mental health condition	67.8% (166)	81.3% (187)	0.000	81.8% (171)	79.7% (137)	0.720
In the future, I would be willing to live near someone with a mental health condition	71.4% (175)	76.1% (175)	0.333	75.7% (159)	76.2% (131)	0.407
In the future, I would be willing to continue a relationship with a friend who developed a mental health condition	77.1% (189)	81.7% (188)	0.147	89.0% (186)	79.7% (137)	0.019

*Baseline data weighted by age and gender

aware respondents reported that they had provided support to someone with a mental health condition in the past 6 months, relative to those not campaign aware ($p=0.005$).

The campaign aware group also reported nearly significant differences in agreement that individuals with mental health conditions are not more dangerous ($p=0.052$), and in

Table 3 Attitudes toward mental health, intervention vs control, from baseline to follow-up

	Intervention			Control		
	Baseline N = 245*	Follow-up N = 230	p value	Baseline N = 211*	Follow-up N = 172	p value
Therapy and counseling can be an effective treatment for people with mental health conditions	82.0% (201)	86.1% (198)	0.558	92.4% (194)	82.0% (141)	0.019
Medication can be an effective treatment for people with mental health conditions	76.2% (186)	80.0% (184)	0.001	89.5% (187)	73.3% (126)	0.001
In the past 6 months, I have provided support to someone with a mental health condition	71.8% (176)	70.4% (162)	0.169	69.7% (147)	76.2% (131)	0.178
In the past 6 months, I have taken steps to improve my mental health	62.9% (154)	67.4% (155)	0.349	66.0% (138)	66.3% (114)	0.935
Most people would be willing to marry someone who has received treatment for a mental health condition	61.2% (150)	67.0% (154)	0.193	63.3% (133)	70.9% (122)	0.117
Most people would accept a person who has fully recovered from a mental health condition as a teacher of young children in a public school	59.2% (145)	65.7% (151)	0.146	62.9% (132)	62.2% (107)	0.896
Those with mental health conditions are far less of a danger than most people believe	54.3% (133)	58.3% (134)	0.164	63.3% (133)	61.0% (105)	0.704

*Baseline data weighted by age and gender

Table 4 Attitudes toward mental health, campaign aware versus not campaign aware, follow-up survey only

	Campaign awareness N = 69	No campaign awareness N = 161	p value
Therapy and counseling can be an effective treatment for people with mental health conditions	91.3% (63)	83.9% (135)	0.227
Medication can be an effective treatment for people with mental health conditions	85.5% (59)	77.6% (125)	0.292
In the past 6 months, I have taken steps to improve my mental health	85.5% (59)	59.6% (96)	0.002
In the past 6 months, I have provided support to someone with a mental health condition	84.1% (58)	64.6% (104)	0.005
Most people would accept a person who has fully recovered from a mental health condition as a teacher of young children in a public school	72.5% (50)	62.7% (101)	0.203
Most people would be willing to marry someone who has received treatment for a mental health condition	76.8% (53)	62.7% (101)	0.054
Those with mental health conditions are far less of a danger than most people believe	69.6% (48)	53.4% (86)	0.052

agreement that most people would be willing to marry someone who has received mental health treatment ($p=0.054$). They also showed higher levels of agreement that most people would accept someone who has recovered from a mental health condition as a teacher ($p=0.203$), and that medication ($p=0.292$) and therapy ($p=0.227$) can be effective treatments.

Discussion

The COVID-19 pandemic has had negative impacts on mental health, with experts citing an urgent need for programs that employ evidence-based methods in an innovative way,

while also measuring outcomes to understand potential effectiveness [30, 31]. Other digital mental health campaigns have shown promise in effectively producing stigma change across various contexts, both globally and within the United States [32–36]. Results from this present study showed significant improvements over time across various dimensions of stigma, including willingness to live and work with someone with a mental health condition, and agreement that medication is an effective treatment. Respondents aware of the campaign showed significant differences in providing support to someone else with a mental health condition and taking steps to improve their own mental health in the past 6 months. Those aware of the campaign also showed nearly significant differences in agreement that individuals with

mental health conditions are not more dangerous, and that most people would be willing to marry someone who has received mental health treatment.

Digital approaches have been highlighted for their use in public health campaigns, in part due to their ability to reach many individuals where they spend their time online [37]. Within this study, nearly one-third of respondents in the intervention region reported campaign awareness at the follow-up survey, showing that intervention efforts were able to deliver relevant messaging at a reach and frequency sufficient to elicit recall of the campaign within a large portion of the community within the first year of the campaign. We believe that this evaluation provides evidence to support the potential effectiveness of pairing digital methods within a locally tailored collective impact framework for stigma reduction.

The positive results shown in this evaluation may be due to a variety of advantages in this approach. The campaign was rooted in best practices in stigma reduction. According to Corrigan [38], strategic stigma change should be guided by specific principles, including targeted and continuous contact with local, credible individuals living with mental health conditions. This concept formed the basis for campaign content, with all Spokesimals Midwest pets and WhatMakesUs testimonials submitted by local individuals. By pairing educational content with images of local pets and people, the campaigns were able to deliver important educational messaging, while also feeling locally relevant and authentic. Establishing authenticity is critical in garnering trust and promoting behavior change [39]. The success of peer-based programs lies in the credibility of those with mental health conditions and their ability to connect with the target audience. The use of personal stories and testimonials can be particularly powerful, and research has shown that these “example” strategies can be more effective at changing behavior than simply sharing statistics or facts [25]. In one study, peer support systems led to an increase in utilization of behavioral health services [40]. This approach also reflects research which shows that the most effective mental health stigma reduction campaigns use a combination of education and contact-based strategies [25]. The results observed in this present study are in line with a previous implementation of this approach, suggesting it can also be feasibly adapted and implemented to a midwestern U.S. context [18].

The collective impact model may also have been an important driver of success. The campaign paired digital communications approaches with local stakeholder building, a strong partner to help the effort, and community organizations amplifying campaign reach. In so doing, the campaign tapped into the community networks that existed, building up the work already being done. Other mental health stigma reduction campaigns have also found

success in working closely with community partners [33]. In addition to supporting current community networks, it is also important to note that the campaigns focused on targeting individuals who were not necessarily interested in mental health. Spokesimals Midwest in particular was built around an interest in pets, because pet content has consistently outperformed nearly all other internet-based content, particularly since the start of the pandemic [41]. The implementation of the collective impact approach therefore involved more than simply activating stakeholders already interested in the topic—it also focused on sparking a new interest in mental health.

This study contains some limitations. The surveys were cross-sectional, and therefore contained different samples at baseline and follow-up. Any changes over time must be interpreted as directional trends. Survey respondents may have answered surveys according to a survey bias, rather than their own perceptions about mental health. This was potentially mitigated by the fact that surveys could be completed in privacy. Finally, the panels used to deliver surveys were different over time, as Qualtrics was unable to match their baseline sample size collected in 2020. Survey feasibility has been a recent challenge with panel companies, given that the number of surveys delivered had increased substantially during the pandemic and 2020 election. This has led to decreased response rates and survey fatigue, and is a challenge that has been faced by many researchers conducting surveys. This is not unique to our study and would have been faced by others conducting similar studies. Panel companies intentionally try to ensure that panels are as representative as possible to the general demographics of their areas, and we weighted the data to ensure that there were no demographic differences over time.

Results from this first year of implementation suggest that a digital approach can be feasibly paired with the collective impact model to reduce mental health stigma in a midwestern U.S. context. The successes reported in this evaluation may be due to the various benefits of this approach, including the potential for digital methods that can be scaled and adapted based on changing circumstances. This approach can be particularly useful when delivering a health communications campaign within the context of a rapidly changing global pandemic. Future research should expand upon the model evaluated in this study to understand its potential effectiveness across different contexts, within different groups, and across a longer time period.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s10900-022-01130-3>.

Author Contributions Author roles are as follows: FD led the manuscript writing, BL contributed to writing, CB reviewed writing, JG led study implementation and reviewed writing, SH reviewed writing, BG

reviewed writing, EW reviewed writing, EB created the study protocol and contributed to writing, and JS created the study protocol.

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Data Availability The data that support the findings of this study are available from the corresponding author upon request.

Code Availability N/A.

Declarations

Conflict of interest The authors report there are no competing interests to declare.

Ethical Approval The study was reviewed by an Institutional Review Board.

Consent to Participate N/A.

Consent for Publication N/A.

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