Social Marketing of Mental Health Treatment: California's Mental Illness Stigma Reduction Campaign

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Objectives. To understand the processes involved in effective social marketing of mental health treatment.

Methods. California adults experiencing symptoms of probable mental illness were surveyed in 2014 and 2016 during a major stigma reduction campaign (n = 1954). Cross-sectional associations of campaign exposure with stigma, treatment overall, and 2 stages of treatment seeking (perceiving a need for treatment and use conditional on perceiving a need) were examined in covariate-adjusted multivariable regression models.

Results. Campaign exposure predicted treatment use overall (odds ratio [OR] = 1.82; 95% confidence interval [CI] = 1.17, 2.83). Exposure was associated with perceived need for services (OR = 1.64; 95% CI = 1.09, 2.47) but was not significantly associated with treatment use in models conditioned on perceiving a need (OR = 1.52; 95% CI = 0.78, 2.96). Exposure was associated with less stigma, but adjustment for stigma did not affect associations between exposure and either perceived need or treatment use.

Conclusions. The California campaign appears to have increased service use by leading more individuals to interpret symptoms of distress as indicating a need for treatment. Social marketing has potential for addressing underuse of mental health services and may benefit from an increased focus on perceived need. (*Am J Public Health.* 2019; 109:S228–S235. doi:10.2105/AJPH.2019.305129)

More than half of US adults with mental health problems fail to receive treatment.[1] Given the availability of effective treatments and the benefits of early intervention, ensuring that even a fraction of these individuals receive care would make a substantial difference to public health.[2] Social marketing (the use of marketing techniques to promote social change) may have the capacity to achieve this objective. It can reach and target individuals who are difficult to identify, such as those with untreated mental illness, and do so in large numbers, relatively inexpensively. Because of this potentially massive reach, even small behavioral changes resulting from marketing campaigns can effect substantial change in population health.[3]

One of the most widely cited barriers to mental health treatment is stigma, including negative help-seeking attitudes (e.g., embarrassment) and personally held prejudicial beliefs about mental illness and treatment.[4,5] Social marketing appears to be effective in reducing the stigma of mental illness.[6] Recognizing this, in 2013 California implemented the most comprehensive mental illness stigma and discrimination reduction campaign ever conducted in the United States. Funded by state voters through Proposition 63 (the Mental Health Services Act), the campaign is part of the state's larger effort to improve the mental health of Californians through prevention and early intervention. Using approaches that increase education and foster contact (in person or through video) with individuals who have had mental health challenges, the campaign targets stigma at multiple levels (institutional, social, individual) with the assumption that changes at each of these levels will reinforce and foster additional changes at the other 2 levels (Figure A, available as a supplement to the online version of this article at http://www.ajph.org).

Although the campaign continues in greatly reduced form, the majority of efforts took place from July 2013 to July 2015. Activities included creation of Web sites, toolkits, and other informational resources targeting multiple stakeholders; creation and distribution of a public television documentary; multimedia outreach; distribution of green ribbon lapel pins; an effort to improve media portrayals of mental illness; and thousands of educational presentations for a variety of audiences across the state.[7] There were English-language adult and young adult versions of the campaign (Each Mind Matters and ReachOutHere) as well as Spanish-language versions (SanaMente and BuscaApoyo). Similar campaigns in England, Sweden, and Australia, as well as other countries, have been associated with small reductions in stigmatizing attitudes and increases in mental health knowledge.[8] Consistent with this, a longitudinal survey of a representative sample of California adults showed positive shifts in a range of stigma-related constructs by the end of the campaign's first year.[9]

However, a reduction in stigma is only one of California's goals. A key objective of the campaign is also to increase the percentage of individuals with mental health problems who obtain treatment, either directly (as a

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result of campaign exposure) or indirectly (as result of a change in the institutional and social climate; see Figure A). Estimates of mental health service use from the National Survey on Drug Use and Health (NSDUH) are consistent with an increase in service use.[10–12] As Figure 1 indicates, there was an uptick in use of mental health services in the initial years of the campaign, followed by a slight drop off (although levels remained higher than pre-campaign). Service use also rose in the nation as a whole but to a lesser extent. The increase in California from 2010–2011 to 2012–2013 was 3.5 times greater than the national increase, and in 2014–2015 it remained 2.3 times greater than the national increase since 2010–2011.

In this study, we explored these shifts more deeply, testing for a potential effect of the campaign by examining associations between self-reported campaign exposure and use of mental health services among adults with mild to serious levels of psychological distress. Few evaluations have explored the impact of social marketing campaigns on those with mental health challenges. Small-group educational presentations have been shown to effectively reduce stigma among those in treatment,[13] and England's Time to Change campaign appears to have reduced experiences of discrimination in this same group.[14] Exposure to Time to Change has also shown associations with intention to seek treatment for a hypothetical future mental health problem.[15]

However, to our knowledge, no studies have examined whether stigma reduction campaigns might increase actual treatment use among adults with probable mental illness. If they do, such campaigns might be used to narrow the gap between the percentage of the population with probable mental illness and the percentage in treatment. We also tested for mechanisms that might explain any campaign effect, examining whether reductions in mental illness stigma in this group account for any increases in treatment use.

We examined these questions at 2 stages of the help-seeking process: recognizing a need for treatment and seeking treatment conditional on this perceived need. These are key stages in the multistep process from becoming aware of symptoms to seeking care,[16] and different factors play a role during each of the stages.[17]

Although stigma has previously been shown to predict both of these outcomes,[5,18] a recent study indicated that different forms of stigma had different associations with the 2 stages. Perceived need was associated with less negative beliefs about mental illness, whereas treatment use was associated with greater knowledge and advocacy intentions and less negative treatment attitudes.[19] This suggests the importance of a 2-step approach to understanding whether and how a stigma reduction campaign might have exerted an effect. Moreover, research has shown that incorporating a stages-of-change approach into social marketing campaigns can improve targeting and effectiveness.[20] To our knowledge, we are the first to explore whether a stigma reduction campaign might have differential effects at the stage of perceiving a need for help and the stage of seeking treatment.

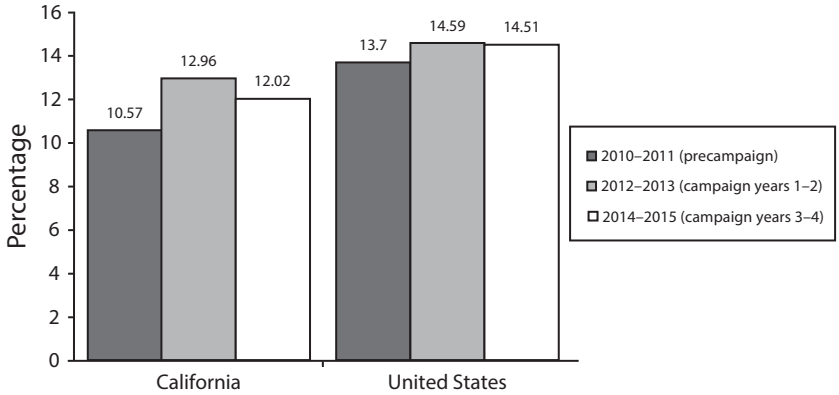

FIGURE 1—Percentage of Adults Using Mental Health Treatment Services in California and the United States Over the Course of the Campaign: 2010–2015

METHODS

Participants were 1954 adults who took part in either the 2014 or 2016 California Well-Being Survey (CWBS); these repeated cross-sectional surveys of representative samples of California residents with probable mental illness were conducted (in part) to evaluate the California stigma reduction campaign. Respondents to the 2013 and 2014 California Health Interview Surveys[21] who scored 9 or greater on the Kessler-6 scale (K6) were eligible for the CWBS. K6 scores of 8 or greater indicate probable mild to serious disorder according to the *Diagnostic and Statistical Manual of Mental Disorders*,[22] so this cutoff is slightly conservative for sampling individuals with probable disorder. Eligible individuals also must have been 18 years or older, must have completed the California Health Interview Survey in English or Spanish, and must have consented to be recontacted for future studies.

Telephone interviews were conducted in English and Spanish between May and August 2014 (2014 CWBS) and between January and March 2016 (2016 CWBS). Response rates were 45.2% and 46.4% for the 2014 and 2016 versions of the CWBS, respectively. Further details have been described by Wong et al.[19]

The exposure to the campaign variable was assessed with items that asked respondents about their past 12 months of exposure to the slogans "Each Mind Matters" and "Sana Mente," advertising for ReachOut.com or BuscaApoyo, or green ribbons for mental health awareness; their visits to EachMindMatters.org and ReachOut.com; and whether they had seen the documentary *A New State of Mind: Ending the Stigma of Mental Illness*. Those indicating exposure to any of these elements were coded as exposed.

Perceived need was assessed with a yes-or-no item that has been validated in national studies of mental health disorders and treatment use[17]: "Was there ever a time during the past 12 months when you felt that you might need to see a professional because of problems with your mental health, emotions, nerves, or

your use of alcohol or drugs?" Those who reported that they needed help exclusively for alcohol or drugs, based on a follow-up question, were designated as not perceiving a need.

Mental health service use was assessed by asking respondents whether they had seen a primary care physician, general practitioner, or other professional such as a counselor, psychiatrist, or social worker for problems with their mental or emotional health in the past 12 months (yes or no). The 2014 CWBS asked this question only of those who perceived a need for treatment; the 2016 CWBS asked it of all participants.

Six dimensions of mental illness stigma were assessed: negative beliefs about mental illness (2-item scale), negative treatment attitudes (3-item scale), intention to conceal "if you had a mental health problem" (2-item scale), perceived public stigma (1 item), positive recovery beliefs (2-item scale), and mental health knowledge and advocacy (3-item scale). These measures were factor scores based on a factor analysis of 14 CWBS items that had been drawn from evaluations of prior stigma reduction campaigns and had shown changes in response to those campaigns.[19]

In a recent publication, it was found that lower CWBS negative belief scores and higher CWBS intention to conceal scores were associated with perceived need for treatment, whereas CWBS knowledge and advocacy and less negative treatment attitudes were associated with mental health service use among those with perceived need,[19] demonstrating the validity of these measures for testing our research questions. Weighted ω values, which account for unequal weighting of scale items,[23] indicate adequate or better internal consistency for the scales employed (negative beliefs, 0.66; negative treatment attitudes, 0.70; intention to conceal, 0.76; perceived public stigma, 0.97; recovery beliefs, 0.50; knowledge and advocacy, 0.60).

Age, gender, and race/ethnicity were self-reported. We combined language of interview with race/ethnicity to create groups distinguishing Spanish- versus English-preferring Latinos. Current psychological distress was assessed with the K6.

We present descriptive statistics and 95% confidence intervals (CIs), bivariable associations between exposure and demographic characteristics, data from 6 multivariable ordinary least squares regression models estimating associations between exposure and stigma, a covariate-adjusted estimate of the association between exposure and service use in the full sample (to replicate a prior analysis of only the first wave of the CWBS),[24] and the 4 primary multivariable logistic regression models of interest. Among these 4 models, one tested the association between exposure and perceived need in the full sample, and one tested the association between exposure and service use in the subset of respondents who perceived a need for treatment (consistent with our 2-step model of treatment use). Both models were then repeated, controlling for the 6 stigma measures. A reduction in the campaign exposure coefficient after controlling for stigma would indicate that stigma explains some or all of the relationship between campaign exposure and perceived need or treatment use. All 4 models controlled for demographics and K6 scores.

To explore the marginal associations between the campaign and outcomes, we used recycled predictions to estimate the marginal probabilities of perceived need and treatment use in the entire sample under each value of exposure (0 or 1).[25] Data were weighted to account for the California Health Interview Survey sample frame and nonresponse to the CWBS surveys. We used SAS/STAT software (version 9.4 of the SAS System for Linux; SAS Institute, Cary, NC) in conducting our analyses.

RESULTS

Table 1 provides data on demographic characteristics of the weighted CWBS sample, that is, California adults with past-year probable mental illness. About 1 in 3 respondents were 18 to 24 years of age, more than half were female, and current symptoms were evenly distributed from no distress to severe distress. The group was racially and ethnically diverse. Overall, 51.9% perceived a need for mental health care in the 12 months prior to the survey. Among those perceiving a need, 70.2% received treatment (data not shown). A total of 27.6% were exposed to the campaign. Latinos and Blacks were more likely to be exposed to the campaign than were Whites.

Table 2 provides the results of covariate-adjusted models predicting each of the 6 dimensions of stigma from campaign exposure. Exposure was associated with more positive recovery beliefs ($P < .05$) but not with negative beliefs about mental illness, negative

TABLE 1—Demographic Characteristics of the Sample Overall and by Exposure to the California Campaign: California Well-Being Survey, 2014 and 2016

Characteristic	No.	Overall, %	Exposed, %	Not Exposed, %	Bivariable Estimate, OR (95% CI)
Age, y					
18–24	230	31.3	37.4	62.6	1.05 (0.67, 1.65)
>24	1724	68.7	36.3	63.7	1 (Ref)
Race/ethnicity, language preference					
Latino, Spanish	205	16.6	56.1	43.9	3.40 (1.76, 6.59)
Latino, English	284	26.4	41.6	58.4	1.89 (1.29, 2.78)
White, English	1171	39.8	27.3	72.7	1 (Ref)
Black, English	76	4.9	46.7	53.3	2.33 (1.20, 4.49)
Asian, English	59	7.0	13.7	86.3	0.42 (0.14, 1.24)
Other	159	5.3	41.2	58.8	1.86 (0.85, 4.11)
Gender					
Male	640	39.4	35.5	64.5	0.92 (0.59, 1.43)
Female	1312	60.6	37.3	62.7	1 (Ref)
Symptoms (K6 score)					
Not distressed (<8)	610	31.0	39.4	60.6	1 (Ref)
Mild to moderate distress (8–12)	596	30.0	40.3	59.7	1.04 (0.64, 1.68)
Severe distress (>12)	748	39.0	31.6	68.4	0.71 (0.45, 1.12)

Note. CI = confidence interval; K6 = Kessler-6 scale; OR = odds ratio. Estimates are weighted (n = 1954).

TABLE 2—Multivariable Models Predicting 6 Dimensions of Mental Illness Stigma Among California Adults With Probable Mental Illness: California Well-Being Survey, 2014 and 2016

Variable	Negative Beliefs About Mental Illness, b (95% CI)	Negative Treatment Attitudes, b (95% CI)	Intention to Conceal, b (95% CI)	Perceived Public Stigma, b (95% CI)	Positive Recovery Beliefs, b (95% CI)	Knowledge and Advocacy, b (95% CI)
Campaign exposure	0.03 (−0.10, 0.15)	−0.03 (−0.20, 0.13)	−0.1 (−0.25, 0.05)	0.04 (−0.15, 0.23)	0.14 (0.02, 0.25)	0.12 (−0.00, 0.24)
Age, y						
18–29	−0.18 (−0.29, −0.06)	0.38 (0.18, 0.57)	0.24 (0.05, 0.43)	−0.12 (−0.29, 0.04)	0.15 (0.02, 0.27)	0.06 (−0.05, 0.17)
≥30 (Ref)	0	0	0	0	0	0
Race/ethnicity, language preference						
Latino, Spanish	1.08 (0.84, 1.32)	0.12 (−0.10, 0.35)	−0.37 (−0.61, −0.14)	0.43 (0.24, 0.62)	−0.02 (−0.23, 0.18)	0.03 (−0.18, 0.24)
Latino, English	0.22 (0.09, 0.35)	0.15 (−0.00, 0.31)	0.19 (0.01, 0.38)	0.21 (0.05, 0.37)	−0.18 (−0.30, −0.06)	0.03 (−0.10, 0.16)
Black, English	0.12 (−0.15, 0.38)	0 (−0.28, 0.28)	−0.19 (−0.44, 0.06)	−0.34 (−0.88, 0.20)	−0.24 (−0.68, 0.20)	0.19 (−0.01, 0.38)
Asian, English	0.38 (0.11, 0.64)	0.18 (−0.13, 0.49)	−0.14 (−0.45, 0.17)	0.33 (0.06, 0.60)	−0.14 (−0.38, 0.09)	−0.23 (−0.47, 0.01)
Other	0.22 (−0.06, 0.51)	0.17 (−0.16, 0.49)	0.04 (−0.35, 0.43)	−0.12 (−0.50, 0.25)	−0.39 (−0.63, −0.16)	−0.03 (−0.26, 0.20)
White, English (Ref)	0	0	0	0	0	0
Gender						
Female	−0.16 (−0.29, −0.02)	−0.15 (−0.29, −0.01)	−0.04 (−0.20, 0.12)	−0.04 (−0.16, 0.09)	0.07 (−0.06, 0.20)	0.23 (0.11, 0.34)
Male (Ref)	0	0	0	0	0	0
Symptoms	0 (−0.02, 0.01)	0.02 (0.01, 0.03)	0.02 (0.01, 0.04)	−0.01 (−0.02, 0.01)	−0.01 (−0.02, 0.00)	0 (−0.01, 0.01)

Note. CI = confidence interval. Estimates are weighted (n = 1954).

treatment attitudes, intention to conceal a hypothetical future mental health problem, awareness of public stigma, or greater mental health knowledge and advocacy.

Consistent with a prior analysis of only the 1066 participants included in the 2014 CWBS,[24] there was a significant positive association between campaign exposure and service use (odds ratio [OR] = 1.82; 95% CI = 1.17, 2.83; Table 3) after adjustment for demographic characteristics and K6 score. Generating marginal probabilities based on this model, we estimated that if all adults with probable mental illness were exposed to the California campaign, 47% would receive mental health treatment. If the same adults were not exposed to the campaign, 36% would receive treatment (Table 3).

Table 3 also shows the results of the 4 models breaking this association down by stage of treatment seeking. As the middle third of the table indicates, there was a positive association between campaign exposure and perceived need for mental health care (OR = 1.64; 95% CI = 1.09, 2.47). Among those with a perceived need (bottom third of the table), the association between campaign exposure and service use was slightly smaller and not significant (OR = 1.52; 95% CI = 0.78, 2.96). Adjustment for stigma did little to alter these findings: the odds ratio for campaign exposure and perceived need for treatment actually became slightly larger (1.67), whereas that for campaign exposure and treatment seeking became smaller and remained nonsignificant (1.39). After adjustment for covariates, we estimated that if all California adults with probable mental illness were exposed to the stigma reduction campaign, 57% of them would perceive a need for mental health treatment. If all were unexposed to the campaign, 49% would perceive such a need (Table 3).

DISCUSSION

Consistent with its goals, it appears that California's campaign to reduce the stigma of mental illness may have drawn more individuals into care. It was also associated with improvements in one (inverse) indicator of stigma: a belief that recovery from mental illness is possible. This dimension of stigma was addressed by several aspects of the campaign.

Nonetheless, any shifts in stigma this association might reflect do not appear to be responsible for the observed relationship between the campaign and treatment use. Indeed, recovery beliefs were not predictive of either perceived need for treatment or treatment use in prior analyses of the CWBS. Knowledge and advocacy intentions predicted treatment use in those prior analyses,[19] but controlling for knowledge and advocacy in the present analysis did not substantially alter the relationship between exposure and treatment. Instead, it appears that California's campaign may have increased the likelihood that those experiencing a probable mental illness recognized their symptoms and interpreted them as something that might require treatment. Such an effect might be observed if increased discussion of mental illness and the perceived commonness of its occurrence led more people to consider the possibility that they were experiencing such a condition.

There may also have been a campaign effect on treatment use among those with a perceived need; however, we could not confirm this effect. The association between exposure and treatment in that subgroup failed to reach statistical significance, but that may have been a function of reduced power in the smaller sample. The estimate was only slightly smaller than the association between exposure and perceptions of need that was significant in the sample overall.

TABLE 3—Bivariable Associations and Multivariable Models Predicting Perceived Need for Treatment and Service Use Among California Adults With Probable Mental Illness: California Well-Being Survey, 2014 and 2016

	Unadjusted		Adjusted		
	% (95% CI)	Bivariable OR (95% CI)	% (95% CI)	Base Model OR (95% CI)	Adjusted for Stigma OR (95% CI)
Treatment use among all sampled (n = 1954)					
Campaign exposure		1.34 (0.89, 2.02)		1.82 (1.17, 2.83)	
Exposed	44.79 (36.87, 52.71)		47.09 (45.01, 54.18)		
Unexposed	37.73 (32.59, 42.86)		36.39 (31.56, 41.22)		
Age, y					
18–29		0.91 (0.64, 1.29)		0.62 (0.41, 0.94)	
≥ 30 (Ref)		1		1	
Race/ethnicity, language preference					
Latino, Spanish		0.27 (0.15, 0.52)		0.24 (0.11, 0.52)	
Latino, English		0.76 (0.50, 1.14)		0.86 (0.54, 1.36)	
Black, English		1.85 (0.93, 3.67)		1.87 (0.70, 4.95)	
Asian, English		0.31 (0.11, 0.88)		0.42 (0.15, 1.17)	
Other		0.49 (0.26, 0.93)		0.43 (0.24, 0.79)	
White, English (Ref)		1		1	
Gender					
Female		2.11 (1.45, 3.06)		2.29 (1.52, 3.44)	
Male (Ref)		1		1	
Symptoms		1.15 (1.13, 1.17)		1.16 (1.11, 1.21)	
Perceived need for treatment among all sampled (n = 1954)					
Campaign exposure		1.26 (0.89, 1.78)		1.64 (1.09, 2.47)	1.67 (1.11, 2.50)
Exposed	55.53 (48.34, 62.71)		56.94 (51.41, 63.47)		
Unexposed	49.74 (45.06, 54.43)		48.61 (44.27, 52.94)		
Age, y					
18–29		1.34 (0.91, 1.99)		1.05 (0.66, 1.68)	0.93 (0.59, 1.48)
≥ 30 (Ref)		1		1	1
Race/ethnicity, language preference					
Latino, Spanish		0.34 (0.18, 0.62)		0.40 (0.20, 0.83)	0.62 (0.26, 1.51)
Latino, English		0.71 (0.47, 1.08)		0.80 (0.49, 1.31)	0.85 (0.52, 1.36)
Black, English		0.91 (0.40, 2.08)		0.95 (0.43, 2.07)	1.01 (0.45, 2.23)
Asian, English		0.31 (0.13, 0.77)		0.35 (0.14, 0.89)	0.44 (0.17, 1.17)
Other		0.59 (0.28, 1.24)		0.57 (0.22, 1.47)	0.63 (0.27, 1.48)
White, English (Ref)		1		1	1
Gender					
Female		1.50 (1.03, 2.19)		1.66 (1.10, 2.49)	1.46 (0.90, 2.37)
Male (Ref)		1		1	1
Symptoms		1.24 (1.19, 1.30)		1.24 (1.19, 1.30)	1.24 (1.19, 1.30)
Treatment use among those perceiving need (n = 1011)					
Campaign exposure		1.13 (0.62, 2.08)		1.52 (0.78, 2.96)	1.39 (0.73, 2.67)
Exposed	71.83 (61.63, 82.03)		74.48 (65.87, 83.14)		
Unexposed	69.21 (61.78, 76.63)		67.47 (59.51, 75.43)		
Age, y					
18–29		0.64 (0.35, 1.16)		0.43 (0.24, 0.79)	0.43 (0.23, 0.81)
≥ 30 (Ref)		1		1	1

Continued

TABLE 3—*Continued*

	Unadjusted		Adjusted		
	% (95% CI)	Bivariable OR (95% CI)	% (95% CI)	Base Model OR (95% CI)	Adjusted for Stigma OR (95% CI)
Race/ethnicity, language preference					
Latino, Spanish		0.22 (0.08, 0.56)		0.15 (0.05, 0.42)	0.22 (0.05, 0.95)
Latino, English		0.97 (0.53, 1.77)		1.02 (0.54, 1.90)	1.35 (0.67, 2.72)
Black, English		1.11 (0.26, 4.75)		0.80 (0.15, 4.28)	0.79 (0.18, 3.49)
Asian, English		0.41 (0.10, 1.63)		0.48 (0.10, 2.27)	0.84 (0.15, 4.73)
Other		0.57 (0.20, 1.62)		0.67 (0.28, 1.59)	0.82 (0.32, 2.08)
White, English (Ref)		1		1	1
Gender					
Female		2.41 (1.44, 4.04)		2.60 (1.48, 4.56)	2.47 (1.24, 4.92)
Male (Ref)		1		1	1
Symptoms		1.05 (0.99, 1.10)		1.05 (1.00, 1.12)	1.06 (1.00, 1.13)

Note. CI = confidence interval; OR = odds ratio. Estimates are weighted.

In summary, California's campaign holds promise for positive change. It should be noted that the campaign is not a simple mass media campaign focused on reaching individuals with a single message, as are some public health campaigns. It was part of a complex, multilevel social marketing program designed to shift the broader social and structural environment, and it communicated to residents in a variety of ways. We focused on whether individuals directly exposed to campaign messages changed their actions and beliefs; however, changes in the social and institutional climate of California may also have caused changes among individuals, changes that this method would not detect.

Moreover, many of the items we used to tap exposure required survey participants to recognize that they were exposed to the campaign (recall exposure to the slogan "Each Mind Matters," for example). Some campaign activities, such as small-group educational presentations, were not branded as Each Mind Matters. Thus, even some direct-exposure effects may have been missed as a result of our focus on recalled exposure. Although the complexity of the California campaign made it difficult for us to tease out those who were exposed versus unexposed, this complexity may also have been important to the campaign's effectiveness.[26]

Another key limitation of our analysis is its cross-sectional design. We cannot assume that the associations documented are causal. The likelihood that exposure to the campaign or recollection of such exposure was greater among those inclined to perceive need or seek treatment must be considered. Similarly, unobserved characteristics might explain some or all of the associations between campaign exposure, perceived need, and treatment use. The uptick in treatment use in California observed in the NSDUH[10–12] bolsters the possibility that the campaign may have been effective in increasing use of services, but a causal inference cannot be made.

It may also be that California is experiencing a secular trend toward greater acceptance of those with mental health problems (indeed, the passage of the proposition that funded the campaign suggests such a trend), and this trend is fostering greater recognition of mental illness among those in distress. Indeed, it seems likely that such trends set the stage for the campaign to function effectively. Hornik[26] has argued that public health campaigns are most likely to be effective when they capitalize on and facilitate shifts in social norms. Thus, caution should be exercised in assuming that the same relationships would be observed in less supportive environments.

Our measures of stigma did not include vignette-based measures of social distance, which may be core to public perceptions.[27] These measures were too lengthy for inclusion and are arguably more relevant for assessing reactions to others with symptoms of mental illness than for assessing reactions to one's own symptoms. Finally, we did not assess use of complementary or informal forms of help that may have increased as a consequence of the campaign.

Conclusions

In spite of its limitations, our research brings new insight to the study of stigma reduction efforts such as the one in California and its international peers. Prior research has documented reductions in stigma among members of the general public in response to social marketing, and a few studies have shown reduced self-stigma or experiences of discrimination among those in treatment.[8] We add to this literature the finding that one campaign was associated with greater treatment use. Our prediction of mental health service use as a key outcome, our focus on a group of individuals with symptoms indicative of probable mental illness (without regard to their treatment status), our sample's broad racial and ethnic diversity, and our examination of perceived need for treatment as a pathway from campaign exposure to service use are all unique, as is our finding that perceived need rather than stigma may have driven campaign effects.

Perceived need has been recognized as the greatest barrier to seeking mental health services other than the desire to handle the problem on one's own.[28] By contrast, a recent review ranked stigma fourth among barriers and showed that only 2 forms, internalized stigma (fear or embarrassment) and stigma associated with seeking or receiving treatment, are consistently associated with lack of help seeking.[29] This suggests that, if their goal is ultimately to increase treatment seeking, future campaigns might benefit from a stronger focus on need recognition. However, campaigns may also have other goals beyond treatment seeking, such as improved quality of life. Targeting stigma may be an effective method of achieving these other goals.[30]

A campaign that increases help seeking among those with clinical need may also increase treatment of those with subclinical symptoms. These individuals may not need treatment or might recover on their own. Treatment use in this group could divert resources from needier individuals or result in overprescribing of drug treatment,[31] although evidence also indicates individuals with subclinical symptoms do benefit from mental health care.[32]

In addition, some theorists argue that treatment is a form of social control.[33] Increasing enrollment in care is not uniformly advantageous from this perspective. The need for innovative, population-based approaches to reduce underuse of mental health care must be weighed against these concerns. Nearly 2 decades ago, the US surgeon general encouraged individuals who have a mental health problem or who think they have symptoms of mental disorder (including those with subclinical issues) to seek treatment. He urgently called for fresh approaches to disseminating information to the public that mental disorders are valid, treatable health conditions[2] in service of this treatment-seeking goal. The gap between the percentage of individuals with a mental health need and the percentage who seek treatment has not changed substantially since that time.

Public Health Implications

Our data represent the first evidence that social marketing campaigns may be useful for increasing the percentage of individuals with probable mental illness who obtain treatment. We do not have clear evidence of a causal effect of the California campaign, and campaigns might not be as effective in an environment that is not as supportive of people with mental illness. However, our results suggest that similar campaigns hold promise and should be considered as a way of closing the gap between the percentage of people in the United States with a need for mental health services and the substantially smaller percentage who use them. AJPH

CONTRIBUTORS

R. L. Collins oversaw the design and analysis and led the interpretation and writing. All of the authors contributed to design, analysis, interpretation, and editing of the article.

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CONFLICTS OF INTEREST

None of the authors report a conflict of interest.

HUMAN PARTICIPANT PROTECTION

This study was reviewed and approved by the Human Subjects Protection Committee of the RAND Corporation. Participants provided oral informed consent.

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