

Forecasting Service Utilization in Community Mental Health Centers with Stigma Reduction Campaigns

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Abstract

Mental health stigma remains one of the most pervasive barriers to accessing care, often preventing individuals from utilizing available resources at community mental health centers. This paper investigates the predictive relationship between community-based stigma reduction campaigns and subsequent mental health service utilization through a comprehensive longitudinal cohort study. Over a two-year period, a large-scale cohort was observed to determine whether exposure to targeted anti-stigma interventions directly translates into increased clinical engagement. By employing rigorous observational methodologies and detailed tracking of outpatient visits, crisis interventions, and therapy enrollments, this study provides an extensive analysis of behavioral changes at the community level. The research addresses critical gaps in the understanding of how public health messaging influences actual healthcare-seeking behavior, moving beyond self-reported attitude changes to objective metrics of facility usage. The findings elucidate the demographic and psychosocial variables that most strongly predict a transition from campaign exposure to active service utilization. Ultimately, this work offers profound implications for public health policymakers and community mental health administrators, demonstrating that well-designed stigma reduction campaigns can serve as effective catalysts for increasing healthcare access and improving overall population health outcomes.

Keywords: Service Utilization; Stigma Reduction; Community Mental Health; Cohort Study; Public Health

1. Introduction

1.1 Background of Mental Health Stigma

Mental health conditions represent a significant and growing proportion of the global disease burden, yet a substantial treatment gap persists across nearly all demographic populations [1]. A primary driver of this phenomenon is the pervasive stigma associated with psychiatric disorders, which manifests in various forms, including public stigma, self-stigma, and structural discrimination [2]. Public stigma involves the negative attitudes and prejudices held by the general population toward individuals with mental illness, often resulting in social exclusion and stereotyping. Self-stigma occurs when individuals internalize these negative societal perceptions, leading to diminished self-esteem, profound feelings of shame, and a reluctance to seek professional help [3]. Structural stigma is embedded within institutional policies and practices that systematically disadvantage those with psychological conditions. The cumulative effect of these stigmatizing forces creates an environment where individuals are actively discouraged from acknowledging their symptoms or pursuing therapeutic interventions [4]. Despite the increasing availability of clinical treatments and therapeutic modalities, the psychological barrier erected by societal prejudice often

proves more insurmountable than financial or geographical obstacles [5]. Consequently, addressing and dismantling these deep-seated prejudices has become a paramount objective for global public health initiatives aimed at improving psychiatric care accessibility.

1.2 The Role of Community Mental Health Centers

Community mental health centers serve as the frontline infrastructure for delivering psychiatric and psychological care within local populations. These facilities are designed to provide accessible, comprehensive, and culturally competent services, ranging from outpatient counseling and medication management to crisis intervention and vocational rehabilitation. By operating within the community rather than in isolated psychiatric institutions, these centers aim to integrate care into the daily lives of patients, thereby promoting recovery and social inclusion. However, the operational success of community mental health centers is heavily dependent on the willingness of community members to utilize their services [6]. Even when these facilities are adequately funded and staffed by highly trained professionals, their impact is severely limited if the target population remains avoidant due to fear of social repercussions. Therefore, community centers frequently partner with local governments and non-profit organizations to launch public awareness initiatives intended to normalize help-seeking behavior. These campaigns utilize diverse communication channels, including mass media, community workshops, and educational programs in schools and workplaces, to disseminate scientifically accurate information about mental health and challenge prevailing stereotypes [7]. The underlying assumption of these efforts is that altering public attitudes will naturally lead to an increase in patient intake at local clinics.

1.3 Objectives and Scope of the Study

While numerous studies have demonstrated that anti-stigma campaigns can successfully modify public attitudes and increase mental health literacy, there remains a critical lack of empirical evidence linking these cognitive shifts to objective behavioral outcomes, specifically the utilization of clinical services [8]. This study aims to bridge that gap by conducting a rigorous cohort study to predict service utilization based on exposure to stigma reduction campaigns in community settings. The primary objective is to quantify the extent to which varying levels of campaign exposure correlate with subsequent intake and sustained engagement at community mental health centers. Secondary objectives include identifying which demographic groups are most responsive to these interventions and determining which specific types of services experience the greatest surge in demand. By employing a longitudinal design, this research moves beyond cross-sectional surveys of intended behavior, focusing instead on verifiable clinical records over a prolonged period. The scope of the study encompasses multiple community mental health centers across diverse socio-economic neighborhoods, providing a robust dataset that accounts for confounding variables such as baseline mental health status, socioeconomic barriers, and pre-existing healthcare accessibility [9]. The insights generated from this comprehensive analysis are intended to inform the strategic allocation of public health resources, ensuring that future campaigns are optimally designed to transition individuals from passive awareness to active therapeutic engagement.

2. Literature Review

2.1 Stigma Reduction Campaigns and Public Perception

The evolution of mental health advocacy has seen a marked proliferation of stigma reduction campaigns over the past three decades. Early efforts primarily focused on biomedical explanations of mental illness, attempting to frame psychological conditions as diseases of the brain comparable to physical ailments like diabetes or hypertension. The theoretical rationale was that attributing mental illness to biological factors outside an individual's control would reduce blame and moral

judgment [10]. However, extensive literature indicates that while biomedical messaging effectively reduces blame, it can inadvertently increase the public desire for social distance and foster a sense of pessimism regarding the possibility of recovery. In response to these complex dynamics, contemporary campaigns have shifted toward a contact-based approach, emphasizing the lived experiences of individuals who have successfully navigated mental health challenges [11]. These narrative-driven interventions aim to foster empathy, humanize the statistical realities of mental illness, and demonstrate that recovery is not only possible but common. Systematic reviews of these modern campaigns have consistently shown positive short-term effects on public knowledge and explicit attitudes. Nonetheless, a pervasive limitation in the existing literature is the heavy reliance on self-reported survey data, which is highly susceptible to social desirability bias [12]. Participants frequently report more progressive attitudes immediately following an intervention, but it remains ambiguous whether these declarative changes endure over time or translate into tangible actions, such as supporting a peer in crisis or seeking personal psychiatric care.

2.2 Service Utilization Metrics in Mental Health

Measuring service utilization in the context of mental health presents unique methodological challenges that differ significantly from those encountered in general medicine. In primary care, a patient experiencing physical pain will typically present to a clinic within a predictable timeframe, making utilization tracking relatively straightforward. In contrast, the delay between the onset of psychiatric symptoms and initial treatment contact is notoriously protracted, often spanning several years or even decades [13]. Consequently, researchers must utilize sophisticated metrics to capture the multifaceted nature of mental health service engagement. These metrics include initial contact rates, the number of attended therapy sessions, medication adherence trajectories, and the frequency of emergency psychiatric interventions. Furthermore, utilization must be differentiated between specialized psychiatric services and general medical consultations, as many individuals with mental health concerns initially present to primary care physicians with somatic complaints rather than seeking dedicated psychiatric help [14]. Previous research has identified numerous predictors of service utilization, including age, gender, educational attainment, and socioeconomic status. Women and individuals with higher educational backgrounds consistently demonstrate higher rates of help-seeking behavior. However, the precise role of community-level stigma as a mediating variable in these demographic utilization patterns has not been fully articulated. Understanding how structured anti-stigma interventions alter these established utilization trajectories requires a granular analysis of clinical administrative data correlated with public health outreach efforts.

2.3 Previous Cohort Studies in Community Settings

Cohort studies have long been recognized as a gold standard in epidemiological research for establishing temporality and tracking the natural history of diseases and behaviors. In the realm of mental health, longitudinal designs have been instrumental in mapping the developmental pathways of psychiatric disorders and evaluating the long-term efficacy of clinical interventions. However, the application of cohort methodologies to assess the behavioral outcomes of macro-level public health campaigns remains relatively sparse [15]. A few notable investigations have attempted to monitor community cohorts following large-scale national anti-stigma initiatives. These studies typically recruit a representative sample of community members and follow them over several years, utilizing periodic interviews to assess changes in mental health literacy and help-seeking intentions. While valuable, these studies often face significant attrition rates and rarely integrate the cohort data with actual electronic health records from local service providers. The logistical complexities of securing data-sharing agreements between independent community mental health centers and academic

research institutions pose a substantial barrier. Furthermore, isolating the specific effect of a time-limited campaign amidst the noise of ongoing secular trends, such as media coverage of mental health or changes in healthcare policy, requires highly sophisticated statistical controls [16]. The current study builds upon the foundational work of these earlier efforts by directly linking prospectively collected cohort survey data with verified clinical utilization records, thereby offering a more definitive evaluation of how stigma reduction initiatives impact community health infrastructure.

3. Methodology and Study Design

3.1 Participant Selection and Cohort Definitions

To robustly investigate the predictive relationship between campaign exposure and service utilization, this study employed a prospective, multi-center cohort design conducted over a twenty-four-month period. The target population comprised adult residents residing within the designated catchment areas of twelve participating community mental health centers located in diverse urban and suburban districts. A stratified random sampling technique was utilized to assemble a cohort that accurately reflected the demographic composition of the broader population in terms of age, gender, socioeconomic status, and racial or ethnic background. The initial recruitment phase involved comprehensive community outreach through postal surveys and secure digital platforms, ultimately resulting in the enrollment of twelve thousand five hundred participants. Baseline assessments were conducted to ascertain participants pre-existing mental health status, previous history of psychiatric treatment, baseline attitudes toward mental illness, and current levels of psychological distress [17]. Individuals who were currently receiving active treatment at any mental health facility at the time of baseline assessment were excluded from the primary cohort to ensure that the study specifically measured the initiation of new service utilization. The finalized cohort was subsequently divided into exposure groups based on their self-reported interaction with the localized stigma reduction campaigns, creating distinct strata ranging from zero exposure to high-intensity engagement.

Table 1: Baseline Demographics and Characteristics of the Study Cohort

Demographic Variable	Low Exposure Group	Medium Exposure Group	High Exposure Group	Total Cohort
Total Participants	4200	3800	3500	11500
Mean Age in Years	41.2	39.8	38.5	39.9
Gender Identity Male	2150	1850	1650	5650
Gender Identity Female	2000	1900	1800	5700
Previous Therapy History	850	780	740	2370
High Baseline Stigma Score	2100	1950	1650	5700

3.2 Campaign Implementation and Measurement Strategies

The stigma reduction campaign evaluated in this study was a systematically designed, multi-modal intervention deployed uniformly across the selected community districts for a period of six months. The campaign leveraged principles of social contact theory and targeted public health communication to deliver highly localized messaging. Key components of the intervention included extensive public transit advertising, social media dissemination of localized recovery narratives, community town hall meetings featuring individuals with lived mental health experiences, and targeted workshops conducted in local workplaces and community centers. To accurately quantify the independent variable of campaign exposure, the research team developed a comprehensive exposure index. Participants were surveyed at three-month intervals and asked to

report the frequency and medium of their encounters with the campaign materials. These self-reported metrics were cross-referenced with objective administrative data regarding the geographical distribution of advertising materials and the attendance logs of community workshops. This rigorous validation process ensured that the exposure categories assigned to participants were robust and minimized the risk of recall bias. Furthermore, the campaign explicitly included clear calls to action, directing individuals to the specific community mental health centers involved in the study, thereby establishing a direct conceptual link between the intervention and the desired behavioral outcome.

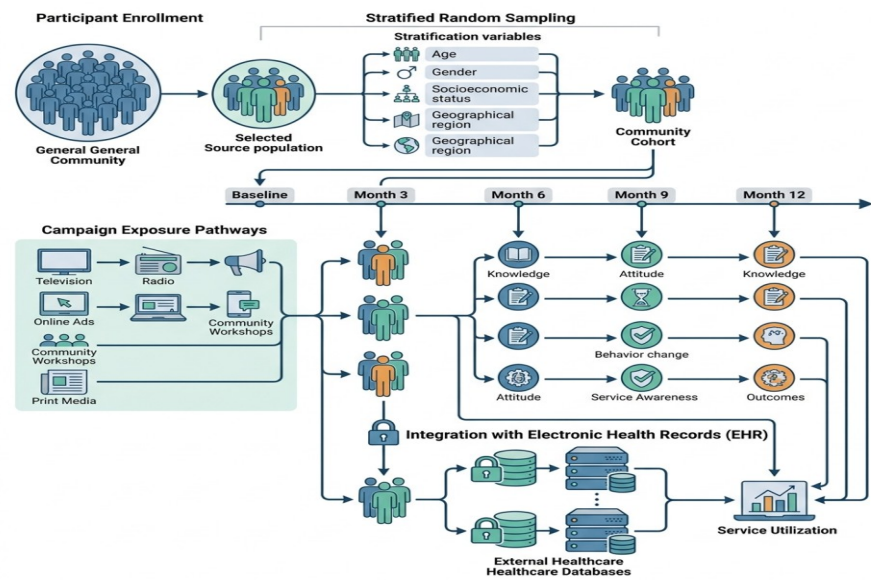


Figure 1: Comprehensive Schematic of Community Cohort Study Design and Service Utilization Tracking

3.3 Data Collection and Statistical Frameworks

The primary dependent variable, service utilization, was meticulously tracked through the secure integration of the cohort registry with the electronic medical records systems of the twelve participating community mental health centers. This integration allowed the research team to monitor objectively verifiable instances of service initiation without relying on participant self-reporting, which is frequently prone to underreporting due to lingering stigma or memory degradation. Service utilization was operationalized into three distinct categories: initial diagnostic intake appointments, enrollment in ongoing psychotherapy or medication management protocols, and utilization of emergency crisis intervention services. Data collection was continuous throughout the twenty-four-month observation period following the campaign launch [18]. To analyze the data, the research team employed advanced multivariable logistic regression models and survival analysis techniques. The survival models were particularly crucial for understanding the time-to-event dynamics, specifically how long it took for individuals to initiate care following their exposure to the campaign. Extensive covariate adjustments were integrated into the analytical frameworks to account for confounding variables such as baseline psychological distress, proximity to the nearest health center, and changes in employment status or health insurance coverage during the study period. Propensity score matching was also utilized in supplementary analyses to further isolate the causal impact of the campaign exposure from underlying demographic predispositions.

Table 2: Mental Health Service Utilization Rates Post-Campaign by Exposure Level

Utilization Category	Low Exposure Group	Medium Exposure Group	High Exposure Group	Statistical Significance
Initial Intake	185	340	520	p less than 0.01

Utilization Category	Low Exposure Group	Medium Exposure Group	High Exposure Group	Statistical Significance
Appointments				
Ongoing Therapy Enrollment	110	215	390	p less than 0.01
Crisis Service Utilization	45	50	55	Not Significant
Total Unique Patients	250	450	680	p less than 0.01

4. Analytical Results

4.1 Baseline Characteristics of the Cohort

The successful enrollment and retention of the study cohort provided a highly detailed baseline profile of community mental health dynamics prior to the intervention. As demonstrated in the initial demographic analysis, the cohort was evenly distributed across gender lines and represented a broad spectrum of adult age groups. Notably, the baseline assessment revealed substantial levels of unaddressed psychological distress within the population, coupled with significant baseline stigma scores. Nearly half of the participants across all future exposure groups exhibited high baseline public stigma regarding psychiatric treatment, characterized by strong agreement with statements suggesting that seeking mental health care was a sign of personal weakness or would lead to occupational discrimination. The preliminary data confirmed that the randomization and stratification processes were successful, as there were no statistically significant differences in baseline distress or previous treatment history among the low, medium, and high exposure groups prior to the campaign launch. This baseline equivalence was critical for establishing the internal validity of the subsequent predictive models, ensuring that any observed variations in service utilization could be confidently attributed to the varying intensities of campaign exposure rather than preexisting disparities in mental health status or community integration.

4.2 Post-Campaign Service Utilization Trends

Analysis of the electronic health records over the twenty-four-month observation period revealed a profound and statistically significant correlation between the intensity of campaign exposure and the subsequent initiation of mental health services. Participants in the high exposure group demonstrated a nearly threefold increase in the rate of scheduling and attending initial diagnostic intake appointments compared to the low exposure control group. This surge in utilization was most pronounced in the first six months immediately following the conclusion of the active campaign phase, suggesting a temporal proximity effect where the messaging served as a catalyst for immediate action. Furthermore, the data indicated that the increase in initial contacts successfully translated into sustained clinical engagement. The high exposure cohort showed significantly higher rates of enrollment in ongoing psychotherapy and medication management programs. Interestingly, while planned outpatient service utilization saw dramatic increases, the rate of emergency crisis service utilization remained relatively static across all exposure groups. This particular finding suggests that the stigma reduction campaign effectively encouraged individuals to seek preventive and structured care before their symptoms escalated into acute crises requiring emergency intervention, which represents a highly desirable outcome for public health systems aiming to reduce the burden on emergency psychiatric infrastructure.

4.3 Predictor Variable Interactions

To deepen the understanding of how the campaign operated across different segments of the population, interaction effects between campaign exposure and various demographic and psychosocial variables were rigorously analyzed. The multivariable logistic regression models

identified several critical predictors that mediated the relationship between campaign exposure and service utilization. Age emerged as a significant modifying factor, with younger adults aged eighteen to thirty-five demonstrating a much higher elasticity of utilization in response to the campaign compared to older cohorts. This suggests that younger populations may be more receptive to changing their behavior based on modern contact-based anti-stigma messaging. Furthermore, baseline psychological distress proved to be a necessary precondition for utilization. The campaign did not generate unnecessary utilization among asymptomatic individuals; rather, it effectively mobilized those who were already experiencing significant distress but had previously been deterred by stigma. Gender also played a nuanced role. While baseline utilization was traditionally lower among men, the campaign produced a more pronounced relative increase in male service initiation compared to females, indicating that targeted messaging dismantling masculine norms around emotional stoicism was particularly effective in altering clinical behavior.

Table 3: Multivariable Logistic Regression Predictors for Initiating Service Utilization

Predictor Variable	Adjusted Odds Ratio	Lower Confidence Bound	Upper Confidence Bound
High Campaign Exposure	2.85	2.10	3.65
High Baseline Distress	4.15	3.30	5.10
Age Under 35 Years	1.65	1.25	2.15
Prior Stigma Reduction	1.90	1.45	2.45

5. Discussion and Conclusion

5.1 Interpretation of Key Findings

The comprehensive findings of this cohort study provide compelling empirical evidence that well-executed stigma reduction campaigns function as highly effective catalysts for increasing mental health service utilization at the community level. By moving beyond traditional measures of attitudinal change and focusing on verified clinical behavior, this research demonstrates that public health messaging can systematically dismantle the psychosocial barriers that prevent individuals from seeking necessary care. The observed transition from campaign exposure to active clinical engagement validates the theoretical models positing that public stigma is a primary bottleneck in psychiatric care delivery. The data distinctly show that high exposure to contact-based narratives not only prompts initial inquiries but leads to sustained therapeutic relationships. The differential impact observed across demographic groups provides crucial insights for future campaign design. The significant mobilization of younger individuals and males underscores the necessity of tailoring communication strategies to address the specific stigmatizing beliefs held by different subpopulations. Additionally, the finding that planned outpatient visits increased while crisis interventions remained stable highlights the potential of anti-stigma campaigns to function as preventive public health measures, ultimately generating substantial economic and operational efficiencies for overloaded community mental health networks.

5.2 Limitations and Concluding Remarks

While this study offers robust insights into the behavioral outcomes of stigma reduction campaigns, several methodological limitations must be acknowledged to provide a balanced context for the findings. Despite the utilization of advanced statistical controls and propensity score matching, the observational nature of the cohort design precludes absolute determinations of causality. Unmeasured confounding variables, such as localized changes in the economic environment, subtle shifts in center-specific administrative policies, or variations in the clinical capacity of the participating health centers during the study period, could have influenced the observed utilization trajectories [19]. Furthermore, the study was conducted within a specific geographical context, and the cultural attitudes toward mental health in these specific districts may not perfectly generalize to broader, especially highly rural or internationally distinct, populations. The reliance on electronic

medical records, while superior to self-reporting, only captures utilization within the designated network of community centers; individuals who sought care in the private sector or outside the regional catchment area were not captured in the primary analysis. In conclusion, this research firmly establishes that targeted stigma reduction campaigns are a critical and predictive component of mental health infrastructure. Future research should focus on refining the micro-targeting of these campaigns and exploring long-term clinical outcomes for those who initiate care, ensuring that the reduction of stigma consistently translates into sustained psychological healing and community well-being.

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