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A Comparative Study of Expressed Emotions in Caregivers of Patients Suffering from Bipolar Affective Disorder, Schizophrenia & Obsessive Compulsive Disorder

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HIGHLIGHTS

- Higher EE in BAD caregivers
- EE differs across disorders
- Caregiver factors not significant
- Weak illness severity correlations
- Need disorder-specific interventions

Key Words:

Expressed Emotion
Caregivers,
Bipolar Affective Disorder
Schizophrenia
Obsessive-Compulsive Disorder

ABSTRACT

Introduction: Expressed emotion (EE) is an important indicator of the caregivers' emotional attitudes and behaviors toward patients with serious mental illnesses and has been associated with treatment outcomes, relapse, and caregiver burden. **Aim & Objectives:** The present study aimed to assess and compare the EE among caregivers of patients with Bipolar Affective Disorder (BAD), Schizophrenia, & obsessive-compulsive disorder (OCD), and to examine its relationship with illness severity. **Material & Methods:** A total of 255 caregivers were enrolled and equally distributed into three groups: caregivers of patients with BAD (n=85), schizophrenia (n=85), and OCD (n=85). Expressed emotion was assessed using the Family Attitude Scale (FAS) and Family Emotional Involvement and Criticism Scale (FEICS). Illness severity was evaluated using the YMRS, HAM-D, PANSS, and Y-BOCS scales. Data were analysed using SPSS version 25, with $p \leq 0.05$ considered statistically significant. **Results:** Sociodemographic characteristics of the caregivers were comparable across all groups. Caregivers of BAD patients demonstrated significantly higher FAS scores (49.40 ± 5.20), perceived criticism, emotional involvement, and total FEICS scores compared with caregivers of schizophrenia and OCD patients ($p < 0.001$). No significant associations were found between EE and caregiver sociodemographic variables. Correlations between illness severity and EE measures were generally weak across all diagnostic groups. **Conclusion:** Caregivers of patients with BAD exhibited significantly higher levels of expressed emotion than caregivers of schizophrenia and OCD patients. The findings suggest that EE is influenced more by the nature of the psychiatric illness than by caregiver sociodemographic factors. Disorder-specific psychosocial interventions aimed at reducing caregiver burden and enhancing coping skills may improve both caregiver well-being and patient outcomes.



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INTRODUCTION

Caregivers play a crucial role in the care and management of individuals with serious mental illness (SMI). A caregiver is generally defined as a family member who has lived with the patient for more than one year and is actively involved in the patient's daily activities, decision-making, and healthcare needs. Serious mental illness encompasses mental, behavioral, or emotional disorders that result in significant functional impairment and substantially limit one or more major life activities. The burden of mental illness is particularly high among individuals experiencing disability due to SMI [1].

The study focuses on schizophrenia, bipolar affective disorder (BAD), and obsessive-compulsive disorder (OCD), all of which have profound effects on patients and place considerable emotional, psychological, and social demands on their caregivers. Expressed emotion (EE) refers to the attitudes, feelings, and behaviors demonstrated by caregivers toward individuals with mental illness. The concept originated from studies conducted in England that examined the influence of family environments on schizophrenia outcomes. Early research by Brown and colleagues demonstrated that patients returning to families characterized by high criticism and emotional overinvolvement were more likely to experience relapse, highlighting the significance of family interactions in the course of mental illness [2]. **Murkey BH, et. al; 2017**, studies have shown that high levels of EE are associated with unfavorable outcomes among patients with psychiatric disorders, particularly schizophrenia. Caregivers exhibiting criticism, hostility, or excessive emotional involvement contribute to increased relapse rates, poorer treatment adherence, and adverse clinical outcomes. Although extensive literature exists regarding EE in schizophrenia, comparatively fewer studies have examined EE among caregivers of individuals with bipolar disorder.

Available evidence suggested that elevated EE is associated with greater relapse risk and a higher number of previous manic episodes. The study on EE among caregivers of patients with OCD, particularly in India, remains limited, although studies indicate that elevated EE is also common in this population [3].

EE is often regarded as a dyadic construct that reflects the quality of the relationship between the caregiver and the patient. Caregiving related stress is considered a major factor contributing to heightened EE. Parents and family members caring for individuals with active symptoms of bipolar disorder may experience significant emotional distress, which can manifest as criticism, anxiety, anger, overprotectiveness, or excessive involvement. George Brown identified five major components of EE: critical comments, hostility, emotional overinvolvement, warmth, and positive remarks. Critical comments involve negative evaluations of the patient, hostility reflects rejection or anger toward the patient, emotional overinvolvement includes excessive self-sacrifice and overprotectiveness, warmth denotes empathy and concern, and positive remarks encompass expressions of appreciation and support [4].

Two theoretical frameworks have been proposed to explain EE. The locus of control model suggests that caregivers with a strong internal locus of control are more likely to display higher EE because they perceive themselves as responsible for outcomes, whereas those with an external locus of control tend to exhibit lower EE due to feelings of reduced personal influence. The stress-diathesis model integrates biological vulnerability with environmental stressors and proposes that EE functions as a psychosocial stressor capable of influencing symptom exacerbation and relapse in individuals with mental illness [5,6]. Expressed emotion (EE) in caregivers of patients with schizophrenia, bipolar affective disorder, and obsessive compulsive disorder (**Figure 1**).

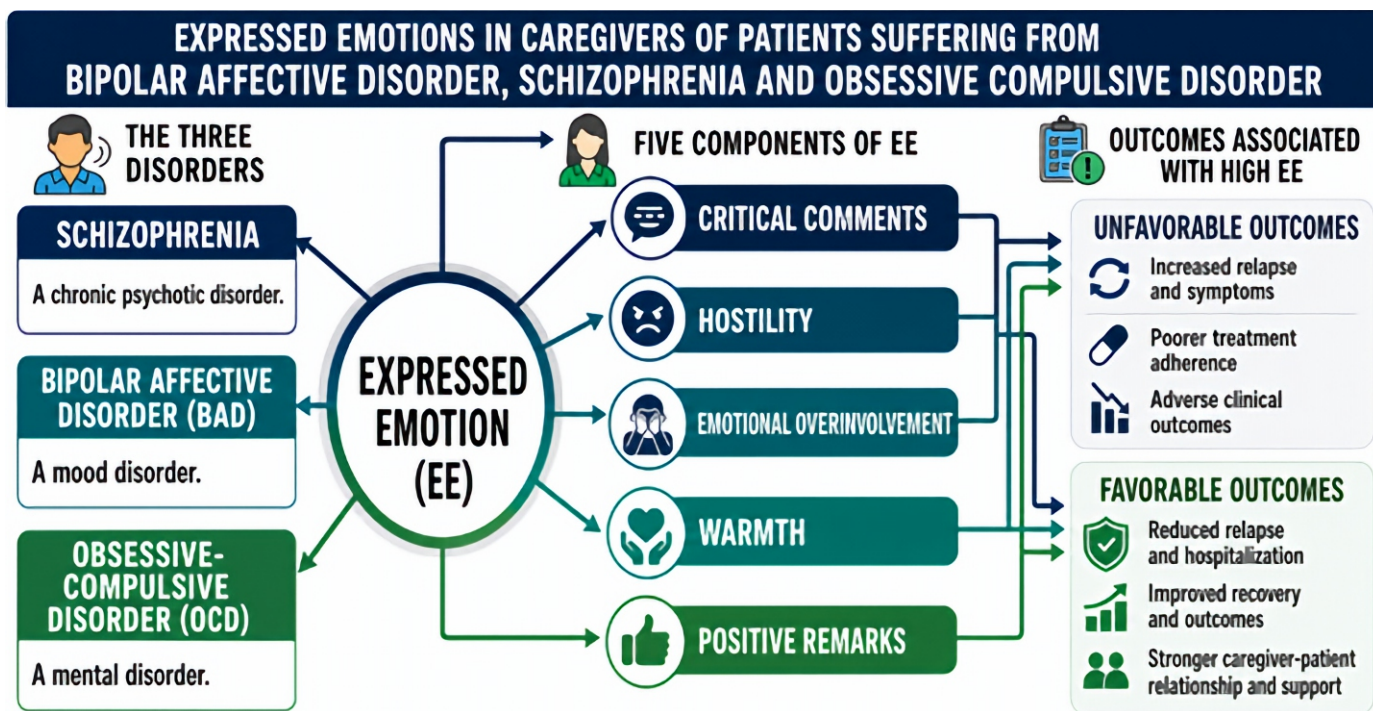


Figure 1. Components of expressed emotion and their impact on clinical outcomes in schizophrenia, bipolar affective disorder, and obsessive-compulsive disorder.

Despite the wealth of research on EE and its impact on mental illness, few studies have compared EE characteristics among caregivers of patients with schizophrenia, bipolar disorder, and OCD. Such a comparison could offer valuable insights into improving patient care across these conditions. This study aims to fill this gap by conducting a comparative analysis of EE in caregivers of patients with these serious mental illnesses.

MATERIALS & METHODS

This observational comparative study was conducted at the Department of Psychiatry, Mahatma Gandhi Medical college, Jaipur from May 2024 to April 2025. Ethical approval has been obtained from the Mahatma Gandhi Medical college, Jaipur.

Study Population

Study population comprised literate caregivers of patients with severe mental illness attending the Psychiatry OPD and IPD of Mahatma Gandhi Medical college, Jaipur. Written informed consent was obtained from caregivers aged 18–60 years who had been directly involved in patient care, lived with the patient, and closely participated in daily activities for more than one year. Caregivers with mental or chronic debilitating medical illnesses, home nurses, caregivers of patients with illness duration under one year, and those caring for patients with intellectual developmental disorders, dementia, substance abuse, or serious medical illnesses were excluded.

Data Analysis

Data were collected, coded, and entered an MS Excel master sheet before being analyzed using SPSS version 25 according to the study objectives. Quantitative variables were expressed as mean \pm standard deviation, while demographic characteristics were presented as frequencies and percentages. Descriptive and inferential statistical methods were applied for data analysis. Chi-square test, unpaired t-test, and logistic regression analysis were used, with statistical significance set at a p-value of ≤ 0.05 .

RESULTS

A total of 255 caregivers, with 85 caregivers each in the Bipolar Affective Disorder (BAD), Schizophrenia, and obsessive-compulsive disorder (OCD) groups, were included in the study. The mean age of caregivers was comparable across groups, ranging from 41.67 to 42.25 years, with no statistically significant difference. Gender distribution was also similar, with nearly equal representation of males and females. Educational status, occupation, monthly family income, family structure, domicile, relationship to the patient, and duration of caregiving showed no significant differences among the three groups. Most caregivers had secondary or higher education, belonged to joint or extended families, and had been providing care for 5–10 years. Although a slightly higher proportion of urban caregivers was observed in the BAD and OCD groups and rural caregivers in the schizophrenia group, the difference was not statistically significant. Similarly, parents, spouses, siblings, and children were proportionately represented as caregivers across all groups.

Overall, the findings indicate that the sociodemographic characteristics of caregivers were well matched among the three study groups, ensuring comparability and minimizing the potential influence of demographic variables on the assessment of expressed emotions and related outcomes.

Family Attitude Scale scores differed significantly among the groups ($p < 0.001$), with caregivers of Bipolar Affective Disorder patients showing the highest expressed emotion (49.40 ± 5.20), followed by schizophrenia (40.10 ± 5.04) and OCD (30.30 ± 5.04). These findings indicate a greater emotional burden and involvement among caregivers of patients with bipolar disorder (**Table 1**). FEICS Perceived Criticism scores showed a significant difference among the groups ($p < 0.001$), with caregivers of Bipolar Affective Disorder patients reporting the highest perceived criticism (19.08 ± 3.08), followed by schizophrenia (15.30 ± 3.00) and OCD (10.30 ± 3.14). This indicates that caregivers of bipolar disorder patients experience greater criticism and emotional strain within family interactions compared to the other groups (**Table 2**). FEICS Emotional Involvement scores differed significantly among the groups ($p < 0.001$), with caregivers of Bipolar Affective Disorder patients demonstrating the highest emotional involvement (30.40 ± 3.66), followed by schizophrenia (25.20 ± 4.50) and OCD (20.08 ± 3.92). These findings suggest greater emotional overinvolvement and caregiving burden among caregivers of bipolar disorder patients compared to those caring for schizophrenia and OCD patients (**Table 3**). The overall FEICS scores showed a statistically significant difference among the groups ($p < 0.001$), with caregivers of Bipolar Affective Disorder patients having the highest scores (50.20 ± 5.32), followed by schizophrenia (40.50 ± 5.41) and OCD (31.10 ± 4.94). This indicates that caregivers of bipolar disorder patients experience significantly greater expressed emotion, emotional involvement, and perceived criticism compared to caregivers of schizophrenia and OCD patients (**Table 4**).

Correlation analysis revealed that the severity of bipolar disorder, schizophrenia, and OCD had little to no significant association with caregivers' expressed emotions. In bipolar disorder, YMRS scores showed extremely weak negative correlations with FAS, perceived criticism, emotional involvement, and total FEICS scores, while HAM-D scores demonstrated very weak correlations with most measures except a moderate positive correlation with total FEICS scores. Among schizophrenia patients, PANSS scores showed no significant correlation with FAS and only weak positive correlations with perceived criticism, emotional involvement, and total FEICS scores. Similarly, OCD severity measured by Y-BOCS demonstrated extremely weak to very weak correlations with FAS, perceived criticism, emotional involvement, and total FEICS scores. Overall, these findings suggest that caregiver expressed emotions are influenced more by factors such as coping abilities, family dynamics, and social support than by illness severity alone (**Table 5**).

Table 1: Family Attitude Scale Score in different type of Mental Illness

Family Attitude Scale Score	BAD	Schizophrenia	OCD
Mean	49.40	40.10	30.30
SD	05.20	05.04	05.04
p-value < 0.001			

Table 2: FEICS Perceived Criticism (PC) Score in different type of Mental Illness

FEICS (PC) Score	BAD	Schizophrenia	OCD
Mean	19.08	15.30	10.30
SD	03.08	03.00	03.14
p-value < 0.001			

Table 3: FEICS Emotional Involvement (EI) Score in different type of Mental Illness

FEICS (EI) Score	BAD	Schizophrenia	OCD
Mean	30.40	25.20	20.08
SD	03.66	04.50	03.92
p-value < 0.001			

Table 4: FEICS Score in different type of Mental Illness

FEICS Score	BAD	Schizophrenia	OCD
Mean	50.20	40.50	31.10
SD	05.32	05.41	04.94
p-value < 0.001			

Table 5: Correlation between Severity of Psychiatric Disorders and Caregiver Expressed Emotion Measures

Disorder	Severity Measure	Caregiver Measure	Equation	R ²	Correlation Strength	Slope Direction
Bipolar Disorder (Mania)	YMRS	FAS	$y = -0.0919x + 51.625$	0.0098	Extremely Weak	Negative
Bipolar Disorder (Mania)	YMRS	FEICS-PC	$y = -0.0218x + 20.362$	0.0016	Extremely Weak	Negative
Bipolar Disorder (Mania)	YMRS	FEICS-EI	$y = -0.1119x + 33.142$	0.0293	Very Weak	Negative
Bipolar Disorder (Mania)	YMRS	Total FEICS	$y = -0.1337x + 53.504$	0.0197	Very Weak	Negative
Bipolar Disorder (Depression)	HAM-D	FAS	$y = 0.2813x + 45.462$	0.0276	Very Weak	Positive
Bipolar Disorder (Depression)	HAM-D	FEICS-PC	$y = -0.0457x + 20.047$	0.0028	Very Weak	Negative
Bipolar Disorder (Depression)	HAM-D	FEICS-EI	$y = -0.1353x + 32.593$	0.0145	Very Weak	Negative
Bipolar Disorder (Depression)	HAM-D	Total FEICS	$y = 0.8647x + 32.593$	0.3749	Moderate	Positive
Schizophrenia	PANSS	FAS	$y = -0.0055x + 40.469$	0.0001	No Significant Correlation	Negative
Schizophrenia	PANSS	FEICS-PC	$y = 0.0347x + 12.901$	0.0143	Very Weak	Positive
Schizophrenia	PANSS	FEICS-EI	$y = 0.0610x + 21.022$	0.0197	Very Weak	Positive
Schizophrenia	PANSS	Total FEICS	$y = 0.0957x + 33.923$	0.0335	Weak	Positive
OCD	Y-BOCS	FAS	$y = -0.0721x + 31.635$	0.0026	Extremely Weak	Negative
OCD	Y-BOCS	FEICS-PC	$y = 0.1200x + 8.0103$	0.0185	Very Weak	Positive
OCD	Y-BOCS	FEICS-EI	$y = 0.1117x + 18.719$	0.0103	Very Weak	Positive
OCD	Y-BOCS	Total FEICS	$y = 0.2317x + 26.729$	0.0279	Very Weak	Positive

DISCUSSION

The present study assessed and compared expressed emotions (EE) among caregivers of patients with Bipolar Affective Disorder (BAD), schizophrenia, and obsessive-compulsive disorder (OCD), while examining the influence of socio-demographic variables and illness severity on caregiver emotional responses. The findings provide valuable insights into the complex relationship between caregiving and serious mental illnesses and highlight important considerations for caregiver-focused interventions [6].

The sociodemographic characteristics of caregivers, including age, gender, education, occupation, income, family type, domicile, relationship with the patient, and duration of caregiving, did not differ significantly across the three diagnostic groups. These findings are largely consistent with **Karançi AN & İnandılar H. 2002** and **Chan SW. 2010**, reported that age, gender, education, and caregiving duration are not major determinants of expressed emotion among caregivers of psychiatric patients. The absence of significant associations suggests that caregiver emotional responses may be influenced more by the characteristics of the illness and caregiving experience than by demographic factors. Although some studies have reported higher levels of EE among older caregivers, females, individuals with lower educational attainment, or those with limited socioeconomic resources, these relationships were not observed in the present study. Such discrepancies may reflect cultural differences, variations in healthcare access, social support systems, and differing caregiving contexts across populations [7,8].

A major finding of this study was the significantly higher levels of expressed emotion among caregivers of patients with Bipolar Affective Disorder compared with caregivers of schizophrenia and OCD patients. Family Attitude Scale (FAS) scores, perceived criticism (PC), emotional involvement (EI), and total Family Emotional Involvement and Criticism Scale (FEICS) scores were all significantly elevated in the BAD group ($p < 0.001$). **Sharma A, et. al; 2021** and **Katta N, et. al; 2024**, demonstrated that caregivers of bipolar disorder patients often experience greater emotional burden, criticism, and overinvolvement due to the episodic and unpredictable nature of the illness. Frequent mood fluctuations, recurrent episodes, and behavioral disturbances may increase caregiver stress and emotional reactivity, resulting in higher levels of criticism and excessive involvement. The findings emphasized that bipolar disorder presents unique caregiving challenges that require targeted psychosocial interventions aimed at reducing emotional strain and improving coping strategies [9,10].

The study also examined the relationship between illness severity and expressed emotion across the three diagnostic categories. Among patients with bipolar disorder, extremely weak negative correlations were observed between Young Mania Rating Scale (YMRS) scores, FAS, FEICS-PC, FEICS-EI & total FEICS scores.

Bhowmik A, et. al; 2023 & **Sabeena PA, et. al; 2024**, reported minimal associations between manic symptom severity and caregiver EE. The results suggested that caregiver emotional responses are influenced less by current symptom severity and more by factors such as resilience, coping abilities, previous caregiving experiences, and availability of social support. Consequently, interventions focused solely on symptom control may be insufficient to reduce caregiver burden [11,12].

Similarly, among caregivers of patients with schizophrenia, Positive and Negative Syndrome Scale (PANSS) scores demonstrated either negligible or weak positive correlations with measures of expressed emotion. While slight increases in criticism, emotional involvement, and total EE were associated with greater symptom severity, the strength of these relationships remained weak. These findings indicated that although symptom severity may contribute to caregiver distress, broader psychosocial factors likely exert a stronger influence on caregiver attitudes and behaviors. Chronic illness course, caregiving burden, family dynamics, and access to supported services may be particularly important determinants of EE in schizophrenia caregiving [13,14].

In the OCD group, correlations between Yale-Brown Obsessive Compulsive Scale (Y-BOCS) scores and measures of expressed emotion were also weak. Although higher OCD severity was associated with slight increases in criticism, emotional involvement, and overall EE, the relationships were not substantial. These findings suggested that caregiver responses to OCD are shaped by multiple factors beyond symptom severity alone. Persistent caregiving demands, accommodation of compulsive behaviors, caregiver stress, and coping resources may play more prominent roles in determining emotional responses [9,15].

Overall, the findings indicated that expressed emotion is a multifaceted construct influenced by the interaction between illness characteristics and caregiver-related factors. While bipolar disorder caregivers exhibited significantly higher levels of criticism and emotional involvement than caregivers of schizophrenia and OCD patients, the severity of illness showed only weak associations with EE across all groups. These results underscored the importance of developing disorder-specific interventions that address caregiver stress, enhance resilience, strengthen coping skills, and improve social support. Such approaches may help reduce caregiver burden, improve family functioning, and contribute to better long-term outcomes for individuals living with serious mental illnesses. Future research should further investigate the psychosocial determinants of expressed emotion and evaluate interventions designed to promote caregiver well-being and effective caregiving practices [11,16].

CONCLUSION

This study compared expressed emotions (EE) among caregivers of patients with Bipolar Affective Disorder (BAD), schizophrenia, and obsessive-compulsive disorder (OCD).

Caregivers of patients demonstrated higher levels of perceived criticism and emotional over-involvement than those caring for schizophrenia or OCD patients, indicating a greater emotional burden associated with the episodic and unpredictable nature of bipolar disorder. Sociodemographic factors showed no significant influence on EE, suggesting that caregiver emotional responses were more closely related to illness characteristics. The findings emphasize the need for disorder-specific interventions to support caregivers, enhance resilience, reduce burden, and improve overall patient outcomes.

LIMITATIONS & FUTURE PERSPECTIVES

The study's limitations include a single-centre setting, a relatively small sample size, and a short study duration, which may limit the broader applicability of the results. Future studies should incorporate multicentre designs with larger populations to enhance validity, assess long-term outcomes, and investigate advanced diagnostic & management approaches. Such efforts will improve overall patient care and help minimize complications.

CLINICAL SIGNIFICANCE

The clinical significance of this study lies in its potential to bridge the gap between research findings and practical healthcare applications. It emphasizes the importance of translating scientific observations into meaningful improvements in patient care, diagnosis, and treatment outcomes. By highlighting real-world relevance, the study contributes to evidence based medical practice and supports informed clinical decision making. Ultimately, the findings aim to enhance patient quality of life, optimize therapeutic strategies, and promote better disease management in clinical settings.

ABBREVIATIONS

EE: Expressed Emotion

BAD: Bipolar Affective Disorder

OCD: Obsessive-Compulsive Disorder

FAS: Family Attitude Scale

FEICS: Family Emotional Involvement and Criticism Scale

YMRS: Young Mania Rating Scale

HAM-D: Hamilton Depression Rating Scale

PANSS: Positive and Negative Syndrome Scale

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AUTHOR CONTRIBUTIONS

All authors significantly contributed to the study conception and design, data acquisition, or data analysis and interpretation. They participated in drafting the manuscript or critically revising it for important intellectual content, consented to its submission to the

current journal, provided final approval for the version to be published, and accepted responsibility for all aspects of the work. Additionally, all authors meet the authorship criteria outlined by the International Committee of Medical Journal Editors (ICMJE) guidelines.

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CONFLICT OF INTEREST

Authors declared that there is no conflict of interest.

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ETHICAL APPROVAL & CONSENT TO PARTICIPATE

All necessary consent & approval was obtained by authors.

CONSENT FOR PUBLICATION

All necessary consent for publication was obtained by authors.

DATA AVAILABILITY

All data generated and analyzed are included within this research article. The datasets utilized and/or analyzed in this study can be obtained from the corresponding author upon a reasonable request.

USE OF ARTIFICIAL INTELLIGENCE (AI) & LARGE LANGUAGE MODEL (LLM)

The authors confirm that no AI & LLM tools were used in the writing or editing of the manuscript, and no images were altered or manipulated using AI & LLM.


AUTHOR'S NOTE

This article serves as an important educational tool for the scientific community, offering insights that may inspire future research directions. However, they should not be relied upon independently when making treatment decisions or developing public health policies.

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