

EMERGENCY DISASTER PREPAREDNESS FOLLOWING THE KATRINA/RITA HURRICANE DISASTER: A SURVEY OF COMMUNITY MENTAL HEALTH FACILITIES IN FIVE SOUTHERN STATES OF THE U.S.A.

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Key Words

Disaster Response, Mental Health, Hurricane, Emergency Preparedness

Abstract

Hurricanes remain a threat to the health and safety of residents of the coastal areas of the United States. Community mental health agencies have a critical role to play in preparing for and responding to large-scale disasters like hurricanes Katrina and Rita of the 2005 storm season. The timely provision of mental health services to disaster victims has long been recognized as an important component of effective emergency management.

This paper will present the findings of a retrospective descriptive study designed to assess the status of emergency disaster preparedness and client service capacity at community mental health facilities prior to and following the Katrina/Rita disaster in the southern United States. This study was conducted one year after the Katrina/Rita hurricanes. Community mental health facilities in the states of Florida, Georgia, Mississippi and Texas were included in this study. The study revealed that there was no significant increase in the number of emergency exercises or drills by community mental health facilities during the year following the Katrina/Rita disaster. This conclusion is consistent with previously published studies by Compton, Mahoney et al., McHugh, et al, and Sweeney et al. These studies also found that no

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automatic increase in community preparedness exercises and drills occurs following a disaster event. The study also indicated that a greater number of community mental health facilities located in disaster declared areas reported exceeding the facilities capacity for referral services during the evacuation and relocation period than community mental health facilities in un-declared areas.

Introduction

This retrospective descriptive study assessed the status of emergency disaster preparedness and client service capacity at community mental health facilities prior to and following the Katrina/Rita disaster in the southern United States. In times of disaster community mental health resources can be challenged. (Elrod, 2006) (Siegal, 2004) There have been few previously published studies to assess the emergency preparedness and service capacity of community mental health facilities before, during and after disaster events. The research findings presented were self-reported by administrators of community mental health facilities located in five selected southern states. A 27-item questionnaire was created, piloted tested and distributed one year after the Katrina/Rita hurricane event to the 168 administrators at community mental health facilities in Louisiana, Mississippi, Texas, Georgia and Florida. The study questionnaire focused on two major themes: emergency preparedness of each community mental health facility before and after Katrina/Rita and the client service capacity of the mental health facility before, during and after the Katrina/Rita disaster event. Responses were received from 85 (51%) of 168 facilities initially requested to participate in this study.

Purpose

The purpose of this retrospective descriptive study was to assess the status of emergency disaster preparedness and client service capacity of community mental health facilities prior to and following the Katrina/Rita disaster in the United States. Responses were reported by facility administrators. This study was conducted one year after the Katrina/Rita disaster.

Theory and Method

Study Population/Sample

Following a review of the related literature, this retrospective study was implemented. A 27-item questionnaire was created, tested for reliability, piloted and distributed to the 168 administrators of community mental health facilities in five selected southern states in the United States. Responses were received from 85 (51%) of the 168 facility administrators asked to participate in this study. The participating facilities were located in the states of Louisiana, Mississippi, Texas, Georgia and Florida. (Balinsky, 2006)

Questionnaire Design/Content

Prior to distribution of the questionnaire to study respondents the following procedures were conducted: 1) submitted questions were reviewed for content accuracy by a four person expert panel 2) the revised questionnaire was pilot tested with 30 mental health professionals in the southern states of North Carolina, Kentucky and Tennessee and 3) and a test-retest procedure was completed with a different group of 35 mental health professionals located in the southern states of South Carolina and Tennessee.

Researchers designed the questionnaire to focus on two major themes: emergency preparedness of each community mental health facility before and after Katrina/Rita and the client service capacity of the mental health facility before, during and after the Katrina/Rita

disaster event. Questions under the emergency preparedness section included whether each facility 1) reported an emergency plan before Katrina/Rita 2) conducted an emergency exercise or drill before or after Katrina/Rita 3) modified an existing emergency plan follow Katrina/Rita and 4) conducted debriefing services for emergency responders to mitigate post traumatic stress disorder. The questions relating to client mental health service capacity before, during and after Katrina included: 1) adequacy of counselors and 2) the ability of facilities to refer clients for addition services such as inpatient mental health, emergency or patient health care, medications, substance abuse, food/shelter, reuniting families, vocational and care/sheltering of companion animals/horses/livestock.(Krisber, 2003), (Elrod, 2006).

Statistical Procedures

Returned questionnaires were code into a data file and analyzed using the Statistical Program for the Social Sciences (SPSS) Version 14. Demographic information (county/parish location, state, zip code and location in an urban/suburban or rural area) was characterized using descriptive analysis (frequencies and percentages). This analysis was completed for the entire 85 responding facilities from the five selected southern states. The responses were also grouped according to whether the location of the community mental health facility's county/parish fell within a Federal Emergency Management Agency (FEMA) Disaster Declared Area immediately following the Katrina/Rita disaster in the fall of 2005. This designation is made by the Federal Emergency Management Agency following the disaster situation in order to provide needed federal emergency services and funding for response and recovery.

Nonparametric tests performed included the Pearson Chi-square and the McNemar analyses. The level of significance chosen for the study was $p = 0.05$. Significant differences in responses associated with emergency preparedness actions and service capacity before, during and after Katrina/Rita were measured. Facility responses were organized into two groups. The first group included facilities located in federal disaster declared areas following Katrina/Rita and the second group included facilities located in the same five selected southern states from area in non-declared disaster locations.

Study Results

Study responses were identified as significantly different when a p value of 0.05 or less was found. An analysis of emergency preparedness responses from all participants was completed for the following questions 1) reporting of an emergency plan before Katrina/Rita; 2) conducting an emergency exercise or drill before or after Katrina/Rita; 3) modifying an existing emergency plan following Katrina/Rita; and 4) providing debriefing services for emergency responders to mitigate post traumatic stress disorder. Selected questions under the questionnaire section of client mental health service capacity before, during and after Katrina included: 1) adequacy of counselors and 2) the ability of facilities to refer clients for addition services such as inpatient treatment, food/shelter, reuniting families and medication. Following the Katrina/Rita disaster 49 (57%) of the community mental health administrators responding reported modifying an existing plan. However, no significant difference was found in the number of administrators reporting plan modification from facilities located in disaster declared areas and those located in non-disaster declared areas.

All 85 community mental health administrators responding to the questionnaire indicated that their facility had an emergency preparedness plan prior to the Katrina/Rita disaster. The responses of administrators concerning whether their facility conducted an emergency exercise or drill excluding a fire drill before and/or during the year following the Katrina/Rita disaster were compared. No significant increase in the number of facilities responding that they conducted an emergency exercise or drill was found. Both before and after Katrina/Rita

one third of the administrators of community mental health facilities reported that no emergency exercise or drill was conducted.

Debriefing services for emergency responders to mitigate post traumatic stress disorders were reported by 30 of the 85 reporting facilities. Only 22 (44%) of the 50 responds from, facilities located in declared disaster areas reported providing these services. Only 8 (25%) of the 33 responses from facilities located in non-declared areas reported conducting debriefing services for responders. No significant difference in response was found based on the location of a facility within or outside of a disaster declaration area.

Responses to questions concerning client mental health service capacity were analyzed according to the location of the facility within a disaster declared county/parish or outside the disaster declared areas. Questions concerning whether a facility had an adequate number of counselors before/during and after the Katrina/Rita disaster were analyzed using the McNemar test. The results of the analysis indicate that during the disaster period there was a significant difference between the self-reported ability of community mental health facilities in disaster declared areas to provide an adequate number of counselors from the ability of facilities located in non-declared areas.

A significantly greater number of community mental health facilities located in disaster declared areas in the study reported exceeding the facilities capacity for referral services during the evacuation and relocation period than community mental health facilities in undeclared areas. Twenty four of the 51 community mental health facility administrators located in a disaster declared area responded that capacity for referral was exceeded. Eight of the 34 community mental health facilities administrators located in a non-disaster declared area reported that capacity for referral services was exceeded. Table I: Frequency of Referral Services Exceeded by Community Mental Health Facilities During a Disaster in Five Selected Southern States in the United States. Table I. provides a list of the top seven referral service reported by community mental health facility administrators to have been exceeded during the Katrina/Rita disaster.

Table: Frequency of Referral Services Exceeded by Community Mental Health Facilities During a Disaster in Five Selected Southern States in the United States

Disaster Declared Counties/Parishes		Non-Disaster Declared Counties/Parishes	
Referral Services Exceeded	Number	Referral Services Exceeded	Number
1. Food/shelter	17	1. Medications	5
2. Inpatient mental health	16	2. Food/shelter	4
3. Medications	14	3. Emergency inpatient	2
4. Substance abuse	13	4. Inpatient mental health	1
5. Reuniting families	12	5. Substance abuse	1
6. Emergency inpatient	10	6. Reuniting families	1
7. Care/sheltering of companion animals/horses/livestock	8	7. Vocational	1

Conclusions

Following the Katrina/Rita disaster a majority of responding community mental health facilities (57%), in five selected Southern States in the U.S.A. modified their facilities emergency preparedness plans regardless of whether the facility was located in a disaster declared area or not. The number of community mental health facilities in five selected Southern States self-reporting conducting emergency exercises or drills except for a fire drill before and after the Katrina/Rita disaster did not significantly increase. This conclusion is

consistent with previously published studies by Compton, Mahoney et al., McHugh, et al, and Sweeney et al. These studies also found that no automatic increase in community preparedness exercises and drills occurs following a disaster event.

The results of this study indicate that disaster declared areas are more likely to experience an inadequate number of community mental health counselors to meet demand during the disaster response period when compared to community mental health facilities located in non-declared disaster areas. Katrina/Rita declared disaster areas reported exceeding their capacity to provide referral services at a significantly higher level than those community mental health facilities located in non-disaster declared areas in five selected Southern States of the U.S.A.

Recommendations

- Federal/State governments should expand proactive incentives for community mental health facilities to increase emergency drills/exercises in the five selected Southern States in the U.S.A.
- Mental health facilities must prepare for an emergency anticipating that during a disaster situation the facility will be required to bring in additional counseling resources to meet demand during the actual disaster response period.
- Community mental health facilities in the five selected southern states in the U.S.A. should include a detailed, specific provision within the facility's emergency preparedness plan to address access and expansion of referral services for clients during a disaster. See Table I for a specific list referral services.
- Future studies should evaluate whether there is a need for community mental health facilities in five selected Southern States in the U.S.A. to provide additional debriefing services for emergency responders to mitigate post traumatic stress disorder following a disaster or whether other agencies unrelated to community mental health facilities are adequately supplementing the service.

Summary

This research study of emergency disaster preparedness and client service capacity at community mental health facilities in five southern states prior to and following the Katrina/Rita disaster indicates that community mental health resources in communities that have been declared disaster areas are more likely to experience demands that exceed their capacity to respond than those facilities that are outside the declared area. This study has helped identify areas of critical need. These include the need for mental health facilities in disaster areas to plan to bring in additional counseling resources to meet increased demand during the disaster response period and to address access and expansion of referral services during a disaster. Additionally, mental health debriefing services for responders to mitigate post traumatic stress disorder should be further evaluated to determine whether additional support services are needed. All community emergency plans should include a major section on community mental health response that is developed in collaboration with local community mental health facilities.

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Author Biography

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Peggy Johnson has a background in respiratory therapy having worked in Intensive Care/Critical Care, Coronary Care and Home Health Care Settings. She has also worked in Cardiopulmonary Rehabilitation in hospital and nursing home settings. She completed a

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