

Conducting Research After the 9/11 Terrorist Attacks: Challenges and Results

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There is a paucity of empirical data on which to base predictions about responses over time following community or personal traumas due to the difficulties involved in collecting these data. The author discusses a number of challenges to conducting methodologically rigorous studies of responses to traumatic experiences. She also maintains that underlying assumptions that guide the research endeavor often drive what psychological processes are assessed and limit the explanatory power of any single study. A longitudinal investigation of emotional, cognitive, and social responses to the September 11 terrorist attacks across the United States is described. The researchers found that the impact of these attacks was not limited to the communities directly affected and that a variety of factors are required to explain the variability in response to this national disaster.

A few weeks before September 11, 2002, several people told me that they had “heard” that psychological problems as a result of the terrorist attacks of September 11th were expected around the 1-year an-

niversary of the event. Similar pronouncements were made around the 6-month anniversary—apparently on the front page of a prominent newspaper, on national media telecasts, and from mental health “experts.” Given that recent surveys suggest that most people get their health information from media sources (Hargreaves, Lewis, & Speers, 2003; Voss, 2003) and that radio, television, and cable broadcasts were filling the airwaves with talk about anniversary reactions to the 9/11 attacks, I wondered why such claims were being made. Is there evidence to suggest that there would be a peak in distress 6 or 12 months after a traumatic event like this?

It is perhaps surprising that despite testimonials to the contrary, there is very little empirical data on which to base predictions about patterns of response over time following community or personal traumas. However, after having spent more than 2 decades conducting research to explore how individuals cope with stressful life events, it is not difficult for me to understand why these data are lacking. Conducting methodologically rigorous studies of responses to traumatic experiences is extraordinarily challenging in several important ways. Research in the natural laboratory is very expensive, labor intensive, and time consuming. Obtaining external funding—particularly quick-response funding following a national or community disaster—is often difficult. Obtaining sam-

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ples of traumatized populations can be challenging, and research on entire groups of traumatized individuals is sometimes restricted. For example, governmental and community-based agencies may serve as gatekeepers to block access to potential respondents, even when those individuals are eager and willing to discuss their experiences with researchers. Institutional Review Boards are often appropriately (but sometimes inappropriately) uncomfortable with trauma-related research. As a result, studies are often conducted with small, nonrepresentative samples of individuals who are willing to answer sensitive questions posed by a stranger. Many studies are conducted within clinical settings with individuals who seek professional help for their mental health symptoms. The conclusions drawn from these studies do not readily generalize to the broader population. When it comes to measurement, there are few "gold-standard" instruments for many of the independent and dependent variables of interest. In fact, researchers tend to use their favorite measures, resulting in difficulties comparing results across studies. In addition, results from studies of one population of individuals (e.g., AIDS or cancer patients) are often inappropriately generalized to the stress and coping field as a whole. Sometimes, causal inferences are inadvertently drawn from correlational results. Despite the array of methodological problems that plague much of this research, "Coping Do's and Don'ts" are frequently espoused in the media, without acknowledgment of the limitations of the research base from which they are drawn.

Recruitment of potential respondents into one's research protocol also poses its own particular challenge, as it is necessary to develop rapport with traumatized individuals. However, researchers must gain the cooperation and trust of individuals at a time when they are often in the throes of a life crisis. This requires extraordinary sensitivity on the investigator's part, as well as adequate information about what

these individuals are going through. Focus groups are useful in this regard, as is active involvement of victimized individuals in the design of the research questions. Without adequate planning and carefully crafted recruitment materials, refusal rates can be disturbingly high. In addition, lack of awareness of respondents' needs, as a result of either poorly constructed questionnaires or inadequate attention to the respondent's experience when completing them, can lead to high rates of attrition in longitudinal research.

In addition, assumptions underlying the research can affect the quality of the data collected. Untested or unsubstantiated assumptions about the coping process can pervade all aspects of the research enterprise, from the timing of contacts with respondents, to the kinds of questions asked, to the mode of assessment. Unfortunately, the underlying assumptions guiding the research endeavor also drive what psychological processes are assessed, thereby limiting the explanatory power of a given study. For more than 2 decades, I have been studying how individuals adjust to stressful life experiences, such as loss of a spouse or a child, divorce, childhood sexual abuse, physical disability, war, and natural disaster. It is clear that many people have misconceptions about the coping process and its outcome, and much of my professional career has been spent identifying and challenging what Camille Wortman and I have labeled the myths of coping with loss (Silver & Wortman, 1980; Wortman & Silver, 1989, 2001). My goal has been to understand the variety of ways in which people cope—to go beyond the assumptions and beyond the clinical "lore." In fact, how people are "supposed" to respond often stands in sharp contrast to the research data (Silver, 2002b). After conducting studies on literally thousands of participants across a wide variety of victimizations, one conclusion I can draw about how people respond to traumatic life events is that there is no one, universal response. Some people will

express less distress than outsiders might expect; others will respond with pronounced distress for far longer than might have been judged “normal” under the circumstances.

Few individuals respond with an orderly sequence of “stages” of emotional response. Many clinicians have suspected that if an individual does not have a negative response in the early aftermath of trauma, he or she would be at high risk for delayed onset of psychological problems, yet empirical support for such a position has rarely been obtained. Positive emotions are often ignored as a part of the response to highly stressful events, yet our own research suggests that positive emotions are quite prominent in the context of coping. “Recovery” from trauma rarely occurs after a few weeks or months. At this point, the data provide little support for the notion that there are “right” or “wrong” ways to respond to a stressful life event—although there are clearly different ways. Through my research and writing, I have maintained that researchers and others need to recognize and respect people’s need to respond to trauma in their own ways and on their own timetables.

Our research team is currently conducting the only ongoing national longitudinal investigation of emotional, cognitive, and social responses to the 9/11 terrorist attacks (Silver, Holman, McIntosh, Gil-Rivas, & Poulin, in press; Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002; Silver, Holman, McIntosh, Poulin, Gil-Rivas, & Pizarro, in press; Silver, Poulin, Holman, McIntosh, Gil-Rivas, & Pizarro, in press-a). Using an anonymous Web-based survey methodology, and working with Knowledge Networks, Inc., which had previously recruited a nationally representative Web-enabled research panel, we have collected data from a national sample of almost 2,000 individuals over the past 2 years, with plans for continued follow-up over the next several years. Our design also included an oversampling from each of four

cities that have experienced community-based trauma (New York City, New York; Oklahoma City, Oklahoma; Littleton, Colorado; and Miami, Florida) as well as a substudy of coping within the family among adolescents and their parents. Assessments have been conducted at 2 weeks and at 2, 6, 12, 18, and 24 months post-9/11; pre-September 11th health and health care utilization data are available on most of our respondents. The purpose of our project has been (a) to investigate the psychological and social processes that help explain individual differences in response to the terrorist attacks; (b) to identify early predictors of long-term adjustment to the attacks; (c) to compare responses to the 9/11 events among individuals who have previously experienced a traumatic event (either personally or in their communities) with those who have not previously encountered trauma; and (d) to investigate the psychological and social processes that help explain the variability in responses to stressful life events more generally.

RESULTS FROM THE NATIONAL LONGITUDINAL STUDY OF 9/11

At this point, our data analyses are ongoing. Nonetheless, it is clear that the September 11th attacks have had widespread impact across the country; results we have obtained in our longitudinal investigation strongly suggest that the effects of these terror attacks were not limited to those communities directly affected. In fact, we have seen fascinating cross-community differences in response (Silver, Holman, McIntosh, Gil-Rivas, & Poulin, in press), although we are still exploring the reasons why residents of Littleton, Colorado, might be responding so differently to the attacks when compared to residents of Miami, Florida. Although posttraumatic stress symptoms clearly declined over the 1st year after the attacks (Silver et al., 2002; Silver, Holman, McIntosh, Gil-Rivas, & Poulin, in press), the degree of individual

response was not explained simply by the degree of exposure to or loss from the trauma (Silver et al., 2002; Silver et al., in press-a). Indeed, we have found great variability in acute and posttraumatic response among individuals who observed the attacks directly or lived within the directly affected communities. Moreover, a substantial number of individuals with indirect exposure (e.g., those who watched the attacks on live television or learned about them afterwards) reported symptoms both acutely around the time of the attacks and over the year afterwards at levels that were comparable to individuals who experienced the attacks proximally and directly (Silver et al., in press-b). We are currently exploring whether psychological distress and 9/11-related posttraumatic symptoms actually peak around its anniversary.

It is also clear that one must examine other factors beyond exposure and loss that may help explain posttraumatic distress in response to national disasters such as the September 11th attacks. In particular, we have found that those who had been diagnosed with mental health difficulties (anxiety disorders, depression) before 9/11 were more likely to respond to the attacks with posttraumatic stress symptoms and higher levels of distress over time (Silver et al., 2002; Silver, Holman, McIntosh, Gil-Rivas, & Poulin, in press; Silver, Holman, McIntosh, Poulin, Gil-Rivas, & Pizarro, in press; Silver et al., in press-a), controlling for their levels of exposure to and loss from the attacks. The strategies people used to cope with the attacks and their aftermath (Silver et al., 2002), their prior traumatic life experiences (Silver, Holman, McIntosh, Gil-Rivas, & Poulin, in press; Silver, Holman, McIntosh, Poulin, Gil-Rivas, & Pizarro, in press), and the traumas they experienced in the intervening year post-9/11 (Silver, Holman, McIntosh, Poulin, Gil-Rivas, & Pizarro, in press) are other important factors that help account for the variability in response. Finally, we found

that the acute stress response to the attacks of September 11th, as well as the posttraumatic stress symptom trajectory over the year post-9/11, was a strong predictor of acute stress response to a subsequent national stressor: the Iraq War (Silver, Holman, McIntosh, Gil-Rivas, & Poulin, in press). Thus, our findings indicate that responses to one stressful event may be strongly related to responses to a prior traumatic event, and they suggest that those who responded with acute distress following the 9/11 attacks may be particularly vulnerable psychologically to subsequent terror attacks.

We have also found effects beyond the posttraumatic stress symptoms that are the typical focus of investigations. Many people have reported finding unexpected positive consequences in the wake of the attacks, such as closer relationships with family members and a greater appreciation of the freedoms the United States offers its residents. Positive emotions and life satisfaction have also been affected. We believe that a narrow focus on clinical outcomes, ignoring subclinical levels of reactions and decrements in positive emotions, can paint a distorted picture of people's responses to negative events. A comprehensive understanding of the impact of traumatic events requires considering both negative and positive outcomes (Silver, 2002b).

CONCLUSIONS AND IMPLICATIONS

As I have described, conducting methodologically sophisticated, externally valid research on coping after traumatic events is challenging at best. However, even when one successfully meets that challenge, dissemination of research findings tends to occur in scientific peer-review publications and at professional conferences. I maintain that it is also critical to bridge the all-too-often widespread communication gap between researchers, clinical practitioners, and policymakers. Although obtaining normative information concerning the adjustment process following trauma can aid

mental health providers by pointing to potential risk factors and can inform the design of effective interventions, without dissemination of this information to the broader community (including primary care practitioners and society at large), research findings tend not to reach the relevant consumers. Inaccurate information circulated in the public domain can be devastating for the victim of a trauma—not only can it lead to a self-perception that one is not coping appropriately, but it can also lead to ineffective support provision by members of one's social network. Translating the empirical results of scientific investigations into practical recommendations for health care professionals, schools, work sites, and community organizations is also necessary. Working effectively with the media and others to take research findings to the public—to ensure that they are effectively applied to both policy and practice—should be an important product of trauma research. The tragedy of 9/11 has had an enormous impact on life in the United States and elsewhere in the world. Hopefully, one benefit of research on these attacks will be more evidence-based predictions and more informed, sensitive, and cost-effective recommendations for the future.

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