



THE TROUBLE WITH AVERAGES: The Impact of Major Life Events and Acute Stress May Not Be What You Think

A Briefing Paper Prepared for the Council on Contemporary Families

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Executive Summary

All those advice books that tell you what to expect when you get married or divorced, lose a spouse, or experience a trauma may be leading you seriously astray. That is the clear implication of a new report to the Council on Contemporary Families. Report author and Pace University psychology professor Anthony Mancini and his colleagues have been studying many of the topics on which experts often dole out generic advice--from marriage and divorce to death of a loved one and military PTSD. They keep finding the same thing: "Our research confirms—in study after study—that people respond in surprisingly diverse ways to a wide variety of life events and acute stressors." The research, discussed in Mancini's report, "The Trouble with Averages: The Impact of Major Life Events and Acute Stress May Not Be What You Think," suggests that there is no one "normal" response to getting married or divorced, losing a spouse to death, or experiencing military deployment. The report was released today from the University of Miami-based Council on Contemporary Families.

Marriage ≠ happiness, divorce ≠ unhappiness, and bereavement doesn't end life as you knew it

There are an infinite number of clichés about marriage, divorce, and the death of a spouse. These clichés put a lot of pressure on people to conform to those hyped expectations, and cause anxiety if they don't. But Mancini's report demonstrates that those clichés—often derived from statistically "average" responses to major life transitions—hide the diversity of ways people react to both good and tragic turns in life. Consider the following findings:

- **Does marriage really make you happy?** 80% of people who marry are happy, but they were equally happy long before they got married. In other words, marriage doesn't make you happy, it makes you married.
- **Just under 10 percent of people who married were changed for the better.** This group showed decreasing well-being in the years before the marriage, followed by gradually increasing well-being afterwards.
- **Some changed for the worse.** Another 6 percent demonstrated a sharp decrease in well-being after the marriage.

How traumatic is the loss of a spouse as a result of death or divorce?

- 72% of divorcing people had relatively high levels of life satisfaction before they divorced and maintained those levels afterward, while nearly one in 10 divorcing people showed substantial increases in well-being. Less than one in five had the "expected" decline in life satisfaction following divorce.
- Sixty percent of those who lost a spouse to death reported stable levels of life satisfaction both before and after the loss of a loved one, despite their sorrow, and five percent reported an increase in life satisfaction.

Mancini and colleagues' research also counters stereotypes about traumatized veterans. For example,

- More than 80 percent of returning soldiers displayed normal levels of functioning before and after deployment
- Only about 7 percent showed substantially elevated symptoms of posttraumatic stress disorder.
- A small group of veterans showed elevated distress both before and after their initial deployment, indicating their distress predated their war experiences.

Mancini observes, "These results should reassure people who hesitate to hire returning veterans, but they offer no support for cutting back treatment programs for veterans. In fact, our findings suggest that more attention should be paid to evaluating soldiers' well-being and providing treatment when needed before as well as after deployment."

Who cares? (Those concerned with first do no harm.)

Mancini makes the relevance unambiguous: "Our research has real life consequences. Reliance on average responses has led to the cultural assumption that most people experience considerable distress following loss and traumatic events and that everyone can benefit from professional intervention. After 9/11, for example, counselors and therapists descended on New York City to provide early interventions, particularly to emergency service workers, assuming that they were at high risk of developing posttraumatic stress disorder." In his report Mancini discusses the harm sometimes done by interventions—such as grief therapy or critical incident stress debriefing—that are based on these assumptions. Mancini continues, "In fact, most people—even those who experience high levels of exposure to acute stress—recover without professional help."

Virginia Rutter
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The Trouble with Averages: The Impact of Major Life Events and Acute Stress May Not Be What You Think

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Life changes, sometimes for happy reasons and sometimes for sad ones. Marriage is assumed to be a happy occasion, and divorce a very difficult one. Losing a loved one is thought to be almost unbearable. Other stressful events, such as military deployment, are considered to pose a substantial risk of posttraumatic stress disorder. Are these beliefs accurate? What is the impact of these events on our well-being and functioning, both in the short and the long term?

This is a critical question. Traditionally, researchers have answered it by examining the *average* response to these events. When we are trying to characterize a population, the average is usually the most appropriate way of doing so. Many phenomena assume a so-called normal or bell-shaped distribution, and, under such circumstances, the average provides an accurate summary, because it is the value most characteristic of the most people and other values are distributed symmetrically on either side of it.

Sometimes averages are *not* an accurate summary of the whole. However, there are a number of circumstances when the average is not characteristic of the whole. For example, when you have different populations grouped together (a “mixture distribution”), the average is not an accurate summary of the whole. Consider height, for example. If we want to characterize height meaningfully, we would describe the average height of men and the average height of women, not the average height of human beings.

Another example is a distribution that is skewed in one direction. A well-known example is household income. Most of the population is grouped on the lower end of the income distribution, while a small proportion of extremely wealthy individuals stretches and distorts the distribution. As a result, the average is artificially inflated, and is not representative of the whole.

A third example comes into play when we study changes in people’s life satisfaction and well-being across time, particularly following major life events and acute stress. Although people’s well-being is generally stable (often called a “set-point”), it can fluctuate considerably following major life events and acute stress. And the nature of this fluctuation can vary dramatically from person to person. Because of that variability, the average may not represent the way most people respond to these events.

Following loss, for example, most people report a modest, short-lived increase in distress that subsides within a few months. However, some people report substantial and long lasting distress symptoms, while others experience moderately elevated distress that

gradually resolves. When we take the average of these patterns, it would appear that grief tends to persist. However, this pattern actually only characterizes a minority of grievers. Most people get back to normal within a few months. In this case, the average response distorts our understanding of the variety of people's actual responses.

George Bonanno and I, along with other colleagues, have explored these effects in a series of studies examining bereavement, divorce, marriage, childbirth, military deployment, traumatic injury, and other stressors. We find that, in many instances, the average response to these transitions is only representative of a small subset of people. Indeed the degree of variability in people's responses is startling.

For example, we examined the effects of marriage, divorce, and bereavement on life satisfaction up to four years after the event. Unlike much previous research, our study followed a large representative sample of more than 16,000 people, assessing them yearly with questions about life events and overall life satisfaction. This design allowed us to assess how people were doing both four years before and four years after a significant life event, a crucial factor. We were startled to discover how tremendously diverse people's reactions to these seemingly universal stressors actually were. In each case, people's response tended to cluster into three or four distinct and very different groupings, each of which differed from the overall average.

Does getting married make people happier? Almost 80 percent of the people we studied reported high subjective well-being in the years both *before and after* the marriage. But they saw no significant change as a result of marrying. However, the remaining individuals showed markedly different reactions to marriage. Almost 10 percent showed decreasing well-being in the years before the marriage, followed by gradually increasing well-being afterwards. Another 6 percent demonstrated a sharp *decrease* in well-being after the marriage. And the smallest group (5.2 percent) experienced a sharp *increase* in well-being in the years leading up to marriage and then sustained that well-being afterwards.

These findings suggest that, on balance, the effects of marriage are modest and relatively short-lived and that the greatest benefit is only enjoyed by a small subset of people. But this small subset affects the average response, creating a false portrait of the effect of marriage on life satisfaction. Indeed, a basic problem with those who promote marriage as the path to happiness—or with any research that ignores inter-individual variability—is that they paint with too broad of a brush.

How much do divorce and bereavement reduce well-being? The effect of divorce on life satisfaction showed even more variety. The pattern we would likely anticipate—a decline in life satisfaction following the divorce—was shown by just 19 percent of the participants. Almost 72 percent of the people whose marriages dissolved showed relatively high levels of life satisfaction before the divorce and experienced essentially no change after it. Perhaps most surprisingly, we found a small but significant proportion of people, almost 10 percent, who showed substantial *increases* in well-being afterwards. These findings provide a more balanced perspective on claims about the long-term negative effects of divorce, at least for adults.

There were more surprises still when we examined people's reactions to losing a spouse. The conventional pattern of grieving—a sharp dip and a gradual return to pre-loss levels of life satisfaction—was apparent in only about 20 percent of the bereaved, and was equally prevalent for men and women. The majority of grievors (59 percent) showed a remarkable degree of resilience, reporting stable levels of life satisfaction both before and after the loss. Contrary to the notion that older adults are especially vulnerable to loneliness and depression after bereavement, the members of the sample most likely to report stable levels of well-being were, in fact, the oldest.

Another group, almost 15 percent, had very low levels of life satisfaction before the loss. People in this group experienced a slight worsening and then a return to pre-loss levels but essentially maintained their already low levels of life satisfaction. In other words, the low life satisfaction of this group was not a consequence of the loss but instead a continuation of chronic low life satisfaction.

Finally, about 5 percent of grievors *improved* following the loss, a pattern that has now been demonstrated in a number of other studies. It is not clear why this group improved, but it is possible they were involved in caregiving for a chronically ill spouse or were locked into a bad marriage. The key point here is that these anomalous patterns and varied reactions are completely obscured when we rely on average responses.

Military deployment and distressed soldiers. When we studied military deployment, we again found divergent reaction patterns among a large representative sample of over 6,000 persons deployed to Iraq or Afghanistan. Contrary to the widespread assumption that PTSD is rife among returning military personnel, more than 80 percent of these soldiers displayed normal levels of functioning before and after deployment, and only about 7 percent showed substantially elevated symptoms of posttraumatic stress disorder.

These results should reassure people who hesitate to hire returning veterans, but they offer no support for cutting back treatment programs for veterans. In fact, our findings suggest that more attention should be paid to evaluating soldiers' well-being and providing treatment when needed *before* as well as after deployment. This is because we found a small group of individuals who showed elevated distress both before and after deployment. Their difficulties might have been attributed to a deployment-related PTSD syndrome if we hadn't been able to demonstrate that their functioning was already impaired *before* the deployment. Interestingly, among the factors that distinguished this group was a greater likelihood of being a heavy drinker and a smoker, suggesting pre-existing and maladaptive efforts to cope with stress.

Why this variability matters. Our research has confirmed—in study after study—that people respond in surprisingly diverse ways to a wide variety of life events and acute stressors. The reasons for these diverse patterns of response are not entirely clear. Evidence suggests that there are a wide variety of factors at play, including personality dimensions, social and environmental supports, and genetic vulnerabilities. Indeed, it appears that some people are inherently more reactive both to acute stress and to positive

events, thriving more than others in response to beneficent experiences and supportive environments but struggling more when faced with significant adversity or hostile environment. Whatever the explanation, when we rely on averages, we often invent a normative reaction that does not exist.

Our research has real life consequences. Reliance on average responses has led to the cultural assumption that most people experience considerable distress following loss and traumatic events and that everyone can benefit from professional intervention. After 9/11, for example, counselors and therapists descended on New York City to provide early interventions, particularly to emergency service workers, assuming that they were at high risk of developing posttraumatic stress disorder. In fact, most people—even those who experience high levels of exposure to acute stress—recover without professional help.

And we now know that many early interventions are actually harmful and can impede natural processes of recovery. For example, critical incident stress debriefing, a once widely used technique immediately following a traumatic event, actually resulted in increased distress three years later among survivors of motor vehicle accidents who received this treatment, compared to survivors who received no treatment. Meta-analyses have confirmed these findings, and it is now considered a harmful psychological treatment.

The same principle applies to grief therapy, which has also been assumed to be helpful for anyone who suffers a loss. On the contrary, grief therapy only benefits people with persistent and elevated distress following a loss. Like early interventions for traumatic events, it may even harm people with normative grief reactions.

Adopting a more nuanced understanding of life events and acute stress complicates the Conventional Wisdom that divorce always results in misery, interpersonal loss in long-term distress, or military deployment in high rates of posttraumatic stress disorder. Discovering anomalous reactions, such as increased happiness following divorce or long-term reductions in satisfaction following marriage, impeaches the idea that we can develop one-size-fits-all social policies or therapeutic tools. The next step is to better understand why people display such different response patterns.

References

- Belsky, J., & Pluess, M. (2009). Beyond diathesis stress: Differential susceptibility to environmental influences. *Psychological Bulletin, 135*, 885-908. doi: 10.1037/a0017376
- Bonanno, G. A., & Mancini, A. D. (2012). Beyond resilience and PTSD: Mapping the heterogeneity of responses to potential trauma. *Psychological Trauma: Theory, Research, Practice, and Policy, 4*, 74-83. doi: 10.1037/a0017829
- Bonanno, G. A., Mancini, A. D., Horton, J. L., Powell, T. M., LeardMann, C. A., Boyko, E. J., et al. (2012). Trajectories of trauma symptoms and resilience in deployed US military service members: Prospective cohort study. *The British Journal of Psychiatry, 200*, 317-323. doi: 10.1192/bjp.bp.111.096552
- Currier, J. M., Neimeyer, R. A., & Berman, J. S. (2008). The effectiveness of psychotherapeutic interventions for bereaved persons: A comprehensive quantitative review. *Psychological Bulletin, 134*, 648-661.
- Lilienfeld, S. O. (2007). Psychological treatments that cause harm. *Perspectives on Psychological Science, 2*, 53-70. doi: 10.1111/j.1745-6916.2007.00029.x
- Mancini, A. D., Bonanno, G. A., & Clark, A. E. (2011). Stepping off the hedonic treadmill: Individual differences in response to major life events. *Journal of Individual Differences, 32*, 144 - 152.
- Mayou, R. A., Ehlers, A., & Hobbs, M. (2000). Psychological debriefing for road traffic accident victims: Three-year follow-up of a randomised controlled trial. *British Journal of Psychiatry, 176*, 589-593.

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Anthony D. Mancini received his Ph.D. from Columbia University in 2004 and completed postdoctoral training there, overseeing an NIH-funded study of complicated grief. His research and scholarly interests have focused on the different ways that people respond to life events and acute adversity. Dr. Mancini has been an investigator on the Millennium Cohort Study, a multi-wave study of veterans' adaptation following military service, and has consulted on a study of resilience among wounded veterans funded by the Department of Veterans Affairs. He is the recipient of two NIH Loan Repayment Program grants. He has published over 40 journal articles and book chapters on individual differences in human stress responding, methodological innovations in the study of the stress response, and the factors associated with adaptation to acute stress. He lives in Brooklyn, New York.

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