

Couples study ties anger to heart problems, stonewalling to back pain

May 24 2016, by Yasmin Anwar

If you rage with frustration during a marital spat, watch your blood pressure. If you keep a stiff upper lip, watch your back.

New research from the University of California, Berkeley, and Northwestern University, based on how couples behave during conflicts, suggests outbursts of anger predict cardiovascular problem.

Conversely, shutting down emotionally or "stonewalling" during conflict raises the risk of musculoskeletal ailments such as a bad back or stiff muscles.

"Our findings reveal a new level of precision in how emotions are linked to health, and how our behaviors over time can predict the development of negative [health outcomes](#)," said UC Berkeley psychologist Robert Levenson, senior author of the study.

Link stronger for husbands

The study, published today in the journal *Emotion*, is based on 20 years of data. It controlled for such factors as age, education, exercise, smoking, alcohol use and caffeine consumption.

Overall, the link between emotions and health outcomes was most pronounced for husbands, but some of the key correlations were also found in wives. It did not take the researchers long to guess which

spouses would develop ailments down the road based on how they reacted to disagreements.

"We looked at marital-conflict conversations that lasted just 15 minutes and could predict the development of health problems over 20 years for husbands based on the [emotional](#) behaviors that they showed during these 15 minutes," said study lead author Claudia Haase, an assistant professor of human development and social policy at Northwestern University.

The findings could spur hotheaded people to consider such interventions as anger management, while people who withdraw during conflict might benefit from resisting the impulse to bottle up their emotions, the researchers said.

"Conflict happens in every marriage, but people deal with it in different ways. Some of us explode with anger; some of us shut down," Haase said. "Our study shows that these different emotional behaviors can predict the development of different health problems in the long run."

The study is one of several led by Levenson, who looks at the inner workings of long-term marriages. Participants are part of a cohort of 156 middle-aged and older heterosexual couples in the San Francisco Bay Area whose relationships Levenson and fellow researchers have tracked since 1989.

The surviving spouses who participated in the study are now in their 60s, 70s, 80s and even 90s.

Each five years, the couples were videotaped in a laboratory setting as they discussed events in their lives and areas of disagreement and enjoyment.

Their interactions were rated by expert behavioral coders for a wide range of emotions and behaviors based on facial expressions, body language and tone of voice. In addition, the spouses completed a battery of questionnaires that included a detailed assessment of specific health problems.

In this latest study, the researchers focused on the health consequences of anger and an emotion-suppressing behavior they refer to as "stonewalling." The study also looked at sadness and fear as predictors of these health outcomes, but did not find any significant associations.

"Our findings suggest particular emotions expressed in a relationship predict vulnerability to particular health problems, and those emotions are anger and stonewalling," Levenson said.

Raised voices, knitted brows

To track displays of anger, the researchers monitored the videotaped conversations for such behaviors as lips pressed together, knitted brows, voices raised or lowered beyond their normal tone and tight jaws.

To identify stonewalling behavior, they looked for what researchers refer to as "away" behavior, which includes facial stiffness, rigid neck muscles, and little or no eye contact. That data was then linked to health symptoms, measured every five years over a 20-year span.

The spouses who were observed during their conversations to fly off the handle more easily were at greater risk of developing chest pain, high [blood pressure](#) and other cardiovascular problems over time.

Alternately, those who stonewalled by barely speaking and avoiding [eye contact](#) were more likely to develop backaches, stiff necks or joints and general muscle tension.

"For years, we've known that negative emotions are associated with negative [health](#) outcomes, but this study dug deeper to find that specific emotions are linked to specific [health problems](#)," Levenson said. "This is one of the many ways that our emotions provide a window for glimpsing important qualities of our future lives."

Provided by University of California - Berkeley

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