I am Jacquelyn Campbell, a Professor at Johns Hopkins University School of Nursing. I have been doing research on domestic violence homicide and the other health outcomes of domestic violence for 30 years. As part of my research we have examined the phenomenon of non fatal strangulation among abused women since 1986 when I was leading support group in a domestic violence shelter. In trying to help women see for themselves their risk of homicide in abusive relationships, I asked the women what was the most frightening abusive action that made them feel like their husband or boyfriend might actually kill them. Many women described episodes of what they called "choking," most commonly when their partner would put his hands around her neck and apply pressure, often until she became unconscious, or when he would put his forearm against her neck with her back against a wall and again apply pressure until she slumped to the floor, totally subdued. I started to ask women about this systematically, using their word "choking" as part of a small research study at that shelter and in a hospital setting, and then more widely in other larger studies. Women told powerful stories of extreme terror – often panic, and an ongoing sense of vulnerability and fear from these episodes. We found that choking was associated with other risk factors for homicide and so I added it to the Danger Assessment, the instrument I developed to help women more accurately assess their risk of being killed by their abuser. At the same time other experts in the field such as Gael Strack, a prosecutor, and Dean Hawley, a physician and medical examiner, were examining the medical effects of these strangulation episodes and the numbers of abused women who had been subjected to this kind of assault. In Chicago we found that 24% of women killed by partners were strangled to death.

As part of those collaborative endeavors I can report that the research shows

- Non fatal strangulation is a potentially lethal act as little as 10 seconds of pressure can lead to unconsciousness and only takes another 1-2 minutes to go from unconsciousness to death.
- Strangulation to unconsciousness can result in death in the next 24-48 hours from a stroke of from asphyxiation from choking on one's own vomit; vomiting frequently occurs after an episode of nonfatal strangulation
- There are few visible signs of strangulation that an officer can identify at the scene but a strangulation victim will usually have a hoarse voice and if strangled to unconsciousness she will be incontinent (wet herself), but this is not information she would usually volunteer to a first responder.
- With trained examination especially under enhanced light, signs such as throat and tongue swelling and petechiae (small broken blood vessels) and erythema (red marks).
- In repeated studies of women from various settings 34% of abused women in primary care settings report at least one episode of "choking" or strangulation (half of them more than once); 47% of abused women in an emergency department study, while 50% of women killed or almost killed by their partners reported at least one episode of strangulation from that partner.
- We found that an episode of prior strangulation increased women's risk by an adjusted (for demographics) odds ratio of 6.70 (95% confidence interval [CI] 3.91–11.49) of becoming an attempted homicide victim
- And that an episode of prior strangulation increased abused women's risk of being killed by their partner by an adjusted odds ratio of 7.48 (95% [CI] 4.53–12.35)

- If a women is strangled to unconsciousness the brain experiences "anoxia" or lack of oxygen which can be considered as a type of traumatic brain injury (or TBI) and can result in memory problems such as difficulty in remembering the event.
- We have also found that a history of strangulation is significantly associated with PTSD for abused women with severe symptoms of anxiety, intrusion (nightmares and flashbacks), hypervigilance and insomnia that can interfere with their ability to function and be productive.
- Finally we have found that a history of strangulation is significantly associated with longterm neurological symptoms such as seizures, difficulty concentrating, memory problems, and dizziness.
- Women who have been strangled need to have forensic examination by a trained professional (ED RN or physician) under enhanced light and be worked up for Traumatic Brain Injury.

Glass, N., Laughon, K., Campbell, JC, Block, C. R., Hanson, G., Sharps, P. W., Taliaferro, E. (2008). Nonfatal strangulation is an important risk factor for homicide of women. *J of Emer Med 35*, 329-335.