

Transcript Details

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Examining Coronary Heart Disease & Psychosocial Stressors

Dr. Brown:

You're listening to *Heart Matters* on ReachMD. I'm Dr. Alan Brown, and on this program, we're going to hear from Dr. Yvonne Michael, an associate professor of epidemiology at the Drexel University Dornsife School of Public Health. Here's Dr. Michael now talking about her study focusing on risk factors for coronary heart disease in post-menopausal women.

Dr. Michael:

We used a large cohort of post-menopausal women that were initially recruited in the early 90's specifically to better understand what their risk factors are for the most important health risks in post-menopausal women. And the study actually had multiple arms, including several clinical trials looking at hormone therapy, diet, and vitamin D. But for this study, we used the observational study participants. So these are participants who, for whatever reason, were unable or unwilling to participate in the clinical trials, so they had no particular intervention imposed upon them. And the study just followed them, collected information about their characteristics, including occupation and some other psychosocial stress measures. We used follow-up through 2015, and they followed these women very carefully for coronary heart disease outcomes.

So what we were able to do with this amazingly rich study of women was to characterize the women with regard to three key measures of psychosocial stress. We looked at job strain. We looked at life event stressors, and we also looked at social strain. So job strain in particular is looking at whether the women were working in jobs that were low control and high demand, or some combination thereof. So the highest type of job strain is those women who have very little decision latitude in their job, but have a lot of demand on their work. In terms of life event stressors, we asked women in terms of whether they had experienced over the past twelve months very specific types of stressors that are known to be very stressful in people's lives. So things like death of a spouse, death of a child, serious health conditions, losing a job, so serious things like that. And then in terms of social strain, there's a lot of research that shows the benefits of social connectedness and that's very important, but we also know that sometimes those people that we are connected with socially may end up also creating stress through a lot of demands or bad interactions. And so we specifically looked at those negative attributes of social connectedness, what we call social strain.

So we looked at all three of these types of stressors, and we looked at them individually, like how they work independent of one another, and then we also looked at how they might increase risk if they existed in combination, so if women had more than one high level of psychosocial stress. And we looked at how those markers of stress were associated with risk of coronary heart disease throughout the follow-up in the study.

One really important thing about this study is that there's an incredible amount of clinical, behavioral, and demographic data collected on these women, so we are able to adjust in our statistical models for factors that might bias our findings. So while this isn't a clinical trial, and we can't be sure that the psychosocial stressors that we're looking at actually caused heart disease, because of the detailed information on these women, we are able to adjust for these important third factors or confounders in all of our statistical analyses. We found that stressful life events and social strain were both associated with increased risk of coronary heart disease among this cohort of postmenopausal women. We also found that exposure to job strain and social strain works synergistically to produce a higher risk of coronary heart disease than would be expected from either stressor alone. We didn't find an independent association for job strain, and it seems like that's likely because job strain was confounded by socioeconomic factors that we weren't able to fully adjust for.

The study population that we considered was primarily white women. But in line with the fact that we've seen these inequitable outcomes during the pandemic, and we know that there's disparities in CHD among women of color, and in particular, black women. So

future research should really evaluate specific risks in non-white women to better understand what's going on with that group.

Dr. Brown:

That was Dr. Yvonne Michael from Drexel University talking about her study focusing on risk factors for coronary heart disease in post-menopausal women. For ReachMD, I'm Dr. Alan Brown. To access this and other episodes in our series, visit ReachMD.com/HeartMatters, where you can Be Part of the Knowledge. Thanks for listening!