Scholarly Contributions

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My research takes a life course approach to examining the interplay of social and biological factors in the etiology and consequences of common mental disorders. The majority of my work has focused on posttraumatic stress disorder (PTSD) with a secondary focus on major depression and other anxiety disorders.

My central contributions have been in helping to move the field towards recognizing the **developmental origins** of PTSD and other common mental disorders and in clarifying the role of **gene-environment interplay** in shaping population mental health, particularly PTSD. The scope of my work also extends to the relation between **mental and physical health**. More recently, I've addressed questions in **global mental health**, with an emphasis on the cross-national epidemiology of trauma and PTSD.

The papers I've selected represent my contributions to (I) PTSD epidemiology, as well as my primary academic areas: (II) developmental origins of PTSD, (III) mental health and physical health, and (IV) global mental health.

Finally, as outlined in my statement, I have led efforts to translate traumatic stress science to a broader, general audience: examples of this work are included below, in addition to my academic papers.

Selected Annotated Publications (* denotes senior author)

I. Developmental Origins

1. **Koenen KC**, Moffitt, TE, Poulton R, Martin J, Caspi A. Early childhood factors associated with the development of posttraumatic stress disorder: results from a longitudinal birth cohort. Psychol Med 2007; 37: 181-192. PMC: 2254221.
2. **Koenen KC**, Moffitt TE, Caspi A, Gregory A, Harrington H, Poulton R. The developmental mental-disorder histories of adults with PTSD: A prospective longitudinal birth cohort study. J Abnorm Psychol 2008; 117: 460-6. PMC: 2666441.

   Significance: Examples of my non-genetic work on developmental origins of PTSD.

   When I started working in this area, PTSD was conceptualized solely as an outcome of trauma. These two papers moved the field towards viewing PTSD as an adverse outcome in a trajectory of risk beginning at conception. The major finding of Koenen et al. (2007) was that PTSD risk in adulthood was shaped by constitutional (e.g. low IQ, difficult temperament) and contextual factors (e.g. poverty) present in early childhood. The major finding in Koenen et al. (2008) was that almost all cases of adult-onset PTSD were preceded by another mental disorder and the majority of those disorders occurred before the age of 15 years. That is, PTSD in fact occurs almost always in persons with a history of other psychopathology.

3. Roberts AL, Galea S, Austin SB, Cerda M, Wright RJ, Rich-Edwards JW, **Koenen KC*.** Posttraumatic Stress Disorder Across Two Generations: Concordance and Mechanisms in a Population-Based Sample. Biol Psychiatry. 2012;72:505-11.

Significance: An example of my new research program of focusing on how maternal traumatic experience shape the mental and physical health of offspring.

This paper was the first to document intergenerational transmission of trauma exposure and PTSD in a population-based sample exposed to the usual range of civilian traumas. We found children of women who had PTSD were more likely than children of women without PTSD to experience traumatic events; this suggests, in part, why the disorder is associated across generations. The results indicate health care providers who treat mothers with PTSD should be aware of the higher risk for trauma exposure and PTSD in their children. The Faculty of 1000 Psychiatry evaluated this paper

4. Koenen KC, Duncan LE, Liberzon I, Ressler KJ. From candidate genes to genome-wide association: the challenges and promise of posttraumatic stress disorder genetic studies. Biol Psychiatry. 2013 Nov 1;74:634-6. PMID: 24120289.

Significance: A major focus of my current work is leading the PTSD working group of the Psychiatric Genomics Consortium

Genetic research on PTSD has lagged behind that of other psychiatric disorders: the first genome-wide association study was published only in 2012. This invited commentary announces the formation of the PTSD working group, of which I am co-founder and leader, within the Psychiatric Genomics Consortium, an international group of over 60 institutions in 19 countries. The goal of the group is to accomplish the critical next step in PTSD genetics: to conduct very large meta- and mega-analyses of candidate and GWAS studies—work that can only be accomplished by large "team science."

II. Mental Health & Physical Health

5. Kubzansky LD, Bordelois P, Jun HJ, Roberts AL, Cerda M, Bluestone N, Koenen KC. The weight of traumatic stress: a prospective study of posttraumatic stress disorder symptoms and weight status in women. JAMA Psychiatry. 2014 Jan; 71: 44-51. PMID: 24258147; PMC4091890.

Significance: A recent example of the work I lead on the health consequences of PTSD in the Nurses Health Study II cohort.

PTSD has been associated with increased risk of chronic disease, but whether PTSD results in changes in health behaviors that lead to chronic disease is now known. This paper shows that PTSD symptoms were associated with faster weight gain and increased risk of obesity in women. To our knowledge, this is the first study demonstrating that PTSD symptom onset is associated with altered BMI trajectories. The presence of PTSD symptoms should therefore raise clinician concerns about physical health problems that may develop and prompt closer attention to weight status.

III. Global Mental Health

6. Karam EG, Friedman MJ, Hill ED, Kessler RC, McLaughlin KA, Petukhova M, Sampson L, Shahly V, Angermeyer MC, Bromet EJ, de Girolamo G, de Graaf R, Demyttenaere K, Ferry F, Florescu SE, Haro JM, He Y, Karam AN, Kawakami N, Kovess-Masfety V, Medina-Mora ME, Browne MA, Posada-Villa JA, Shalev AY, Stein DJ, Viana MC, Zarkov Z, Koenen KC. Cumulative traumas and risk thresholds: 12-month PTSD in the World Mental Health (WMH) surveys. Depress Anxiety. 2014 Feb;31:130-42. PMID: 23983056; PMC4085043.

Significance: An example of the work on the cross-national epidemiology of trauma exposure and PTSD I am leading in the PTSD working group of the World Health Organization World Mental Health Surveys.

Clinical research suggests that PTSD patients exposed to multiple traumatic events (TEs) rather than a single TE have increased morbidity and dysfunction. Although epidemiological surveys in the United States and Europe also document high rates of multiple TE exposure, no population-based cross-national data have examined this issue. We analyzed data from 20 population surveys in the World Health Organization World Mental Health Survey Initiative (n = 51,295 aged 18+). We found 19.8% of respondents with 12-month PTSD reported that their symptoms were associated with multiple TEs. A risk threshold was observed in this large-scale cross-national database wherein cases who associated their PTSD with four or more TEs presented a more "complex" clinical picture with substantially greater functional impairment and greater morbidity than other cases of PTSD. PTSD cases associated with four or more TEs likely merit specific and targeted intervention strategies

Examples of non-academic writing:

1. **Koenen KC**. Testimony for House Foreign Affairs Committee Hearings, Peace Corps at 50. May 11, 2011. (http://foreignaffairs.house.gov/112/koe051111.pdf)
2. **Koenen KC**. Peace Corps needs new sex abuse policy. CNN.com. Opinion. August 17 2011. (http://articles.cnn.com/2011-08-17/opinion/koenen.peace.corps_1_corps-director-aaron-williams-sexual-abuse-peace-corps?_s=PM:OPINION)
3. **Koenen KC**. Sexual assaults, victim blaming continues in the Peace Corps. Blog. July 29 2013 (http://www.womenundersiegeproject.org/blog/entry/sexual-assaults-victim-blaming-continues-in-peace-corps-rise)