large number of previously published analyses of the NHANES data in the literature. The adjustment does not affect P values but only changes the P value considered to represent statistical significance; we provided the P values in our article.

Overall there was no trend in obesity among either all adults or all youth aged 2 through 19 years between 2003-2004 and 2011-2012. When NHANES data from 2013-2014 become available, additional analyses will help clarify trends among all adults and youth, including 2- through 5-year-olds.

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Disclaimer: The Centers for Disease Control and Prevention reviewed and approved this letter before submission. The findings and conclusions in this report are those of the authors and not necessarily of the agency.

- 1. Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of obesity and trends in body mass index among US children and adolescents, 1999-2010. *JAMA*. 2012;307(5):483-490.
- 2. Flegal KM, Carroll MD, Kit BK, Ogden CL. Prevalence of obesity and trends in the distribution of body mass index among US adults, 1999-2010. *JAMA*. 2012; 307(5):491-497.

Housing Mobility and Adolescent Mental Health

To the Editor Dr Kessler and colleagues¹ reported that, at follow-up 10 to 15 years later, boys from households that received housing vouchers in the Moving to Opportunity Demonstration experienced 12-month prevalence of posttraumatic stress disorder (PTSD) at several times the rate of boys from control households. Part of the explanation for this intriguing finding may lie in a phenomenon described in the Birmingham Youth Violence Study, in which "high levels of community violence exposure attenuated the relationships between home and school violence and adjustment, perhaps reflecting desensitization to violence or a process whereby community levels of violence establish 'norms' that affect the interpretation and impact of violence in other settings."²

Such perversely protective effects of community violence exposure would induce systematic differences in the sensitivity and specificity of the PTSD classifier used by Kessler et al¹ in precisely the directions needed to yield the apparently paradoxical voucher effect observed. It would be of interest to know how the Moving to Opportunity voucher and control boys with PTSD differed with respect to the settings, types,³ chronicity, and severity of the precipitating stressors and PTSD symptoms; whether PTSD cases clustered in boys who relocated to high-poverty neighborhoods after voucherfacilitated moves⁴; and whether any effect modification by age at randomization is detectable.

I suspect the findings of Kessler et al $^{\rm l}$ speak more to the construct validity of the instruments used than to housing mobil-

ity as a mental health intervention. A unitary PTSD construct cannot be presumed to support meaningful comparisons of prevalence across environments differing in ambient violence. Relative to ambient norms of conduct, the same principle applies equally to conduct disorder for which Kessler et al¹report a similarly large and detrimental voucher effect in boys.

The apparently paradoxical voucher effects on mental health outcomes in boys in this study may reflect predictable limitations of the construct validity of the instruments used, as much as they reflect the true nature and magnitude of the challenges the boys encountered when moving to low-poverty neighborhoods. The more intuitive mental health outcomes seen in girls perhaps demonstrate only that lifting an ever-present threat of sexual predation⁵ has such a powerful effect that even biased instruments will register it.

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Correction: This article was corrected on July 16, 2014, to fix the last sentence in the second paragraph.

- 1. Kessler RC, Duncan GJ, Gennetian LA, et al. Associations of housing mobility interventions for children in high-poverty neighborhoods with subsequent mental disorders during adolescence. *JAMA*. 2014;311(9):937-948.
- 2. Mrug S, Windle M. Prospective effects of violence exposure across multiple contexts on early adolescents' internalizing and externalizing problems. *J Child Psychol Psychiatry*. 2010;51(8):953-961.
- **3**. Forbes D, Lockwood E, Phelps A, et al. Trauma at the hands of another: distinguishing PTSD patterns following intimate and nonintimate interpersonal and noninterpersonal trauma in a nationally representative sample. *J Clin Psychiatry*. 2014;75(2):147-153.
- **4.** Clampet-Lundquist S, Kling JR, Edin K, Duncan GJ. Moving teenagers out of high-risk neighborhoods: how girls fare better than boys. *AJS*. 2011;116(4):1154-1189.
- **5.** Popkin SJ, Leventhal T, Weissman G. Girls in the 'hood: the importance of feeling safe. http://www.urban.org/UploadedPDF/411636_girls_in_the_hood.pdf. Accessed May 16, 2014.

In Reply The paradoxical effect described by Dr Norris is anything but a paradox. Stress researchers have long known that community contexts can influence interpretations of traumatic experiences and that the effects of these experiences on PTSD vary with the extent to which the experiences shatter deeply held world views about such things as community safety and justice. These processes can lead to patterns like the one found in our study due to the adverse psychological effects of traumatic experiences being greater in better neighborhoods.

However, it is unclear why Norris believes that these well-known cognitive processes would induce systematic differences in the sensitivity and specificity of the PTSD measure used in our research. We see no reason why this would be the case. Norris goes on to assert much more generally that "a unitary PTSD construct cannot be presumed to support meaningful comparisons of prevalence across environments differing in ambient violence." That strong statement dismisses psychiatric epidemiological research on PTSD, which is based

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on studies comparing people across neighborhoods that differ in ambient violence.

Diagnoses based on the PTSD measure in our study, the WHO Composite International Diagnostic Interview, have consistently been shown to have good concordance with diagnoses based on independent blinded clinical reappraisal interviews performed by experienced and culturally competent clinicians. If the kind of bias that Norris asserts to exist was important, these psychometric studies should have shown low concordance across settings, which they did not.

Moreover, the symptom-level data in our study showed adolescent boys in the intervention group had significantly elevated rates of the key symptoms of the disorders we assessed, such as sadness, feelings of worthlessness, nightmares, excessive worries, and behavioral problems compared with boys in the control group, supporting our conclusion that the intervention had negative effects on the mental health of adolescent boys.

Based on these observations, we continue to believe that the most plausible explanation for our finding is the one suggested by the qualitative studies performed in conjunction with the interim Moving to Opportunity evaluation: that new neighborhoods were more accepting of young girls than boys (ages 0-8 years at randomization) moving in from high-poverty neighborhoods. This resulted in more positive net experiences for girls than boys that translated into the mental health benefits for adolescent girls and decrements for adolescent boys that we found a decade later in our long-term evaluation.

The challenge for future research, as noted in our article, is to increase understanding of these processes sufficiently to guide allocation of the more than \$36 billion spent on housing assistance in the United States each year to maximize the health and well-being of all assistance recipients rather than to maximize value for some at the expense of others.

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- 1. Janoff-Bulman R. Shattered Assumptions: Towards a New Psychology of Trauma. New York, NY: Free Press; 1992.
- 2. Kessler RC, Ustün TB. The World Mental Health (WMH) survey initiative version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). *Int J Methods Psychiatr Res*. 2004;13(2):93-121.

3. Haro JM, Arbabzadeh-Bouchez S, Brugha TS, et al. Concordance of the Composite International Diagnostic Interview Version 3.0 (CIDI 3.0) with standardized clinical assessments in the WHO World Mental Health surveys. *Int J Methods Psychiatr Res.* 2006;15(4):167-180.

Definitions of Tremor

To the Editor In their Grand Rounds article, Drs Elias and Shah¹ defined tremor "as a rhythmic and involuntary movement of any body part."

They listed dystonic tremors but noted that these are irregular (not rhythmic), and they excluded clonus, which is a rhythmic and involuntary movement. Could Elias and Shah provide a definition that is consistent with their categorization?

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Conflict of Interest Disclosures: The author has completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none were reported

1. Elias WJ, Shah BB. Tremor. JAMA. 2014;311(9):948-954.

In Reply Ideally, a definition of tremor should accurately include tremulous entities while excluding other nontremulous disorders.

We do not agree that irregular and rhythmic are mutually exclusive. Dystonic tremor has a rhythmicity but may be more irregular in terms of symmetry about a joint (eg, dystonic "nono" head tremor may have a more prominent tremor in one direction, whereas an essential tremor should have a symmetrical head tremor) and can vary in amplitude or even presence based on positioning.

Clonus is, in fact, a rhythmic and involuntary movement. Distinguishing clonus from orthostatic or isometric tremor can be difficult. However, clonus is due to sustained or unsustained activity mediated through the primary reflex arc, producing rhythmic oscillation as a tendon is exposed to sustained stretch. Isometric tremor is mediated through a central generator independent of the reflex arc.

Clonus is also seen in the context of disruption of the corticospinal pathway and not as an isolated finding. This issue furthers the discussion of the differential diagnosis of tremor as other entities (such as epilepsia partialis continua, which can produce rhythmic, involuntary movements as well), reinforcing the need to evaluate rhythmic movements not only in isolation but also in conjunction with an appropriate general and neurological examination.

The challenge in defining clinical phenomenon is to find a description that is adequately broad rather than overly restrictive. If our definition includes entities that are not true tremor, that is a fair criticism but is preferable to a definition that excludes entities that are tremors.

We presented tremor as being due to a disparate group of disorders in which treatment does not overlap. It may not be