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Short communication

Short communication: Flourishing among adolescents with epilepsy: Correlates and comparison to peers

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ABSTRACT

This study was conducted to examine if adolescents with a seizure disorder/epilepsy display less flourishing (thriving) than peers without seizures using data from the National Survey of Children's Health 2011–2012. Adolescent demographics, symptom severity, and parents' anger toward their child were explored as possible predictors of flourishing. Adolescents with seizures exhibited lower flourishing than peers, and flourishing among adolescents with seizures was predicted by symptom severity, age, race/ethnicity, sex, and parental anger. Study results suggest adolescents with a seizure disorder/epilepsy should be targeted for interventions that promote flourishing.

Introduction

Epilepsy impacts approximately 1% of children and adolescents in the United States (US; Russ et al., 2012). Adolescents with epilepsy (AWE) are at risk for a number of negative psychosocial outcomes. AWE experience increased rates of psychological disorders, such as depression, anxiety, conduct problems, and Attention Deficit Hyperactivity Disorder (Rodenburg et al., 2005a; Russ et al., 2012), and approximately 40% of AWE have been diagnosed with a mental health condition (Wagner et al., 2015). AWE have also been described as having a lower quality of life (Taylor et al., 2011), greater academic problems (Bailet and Turk, 2000), and poorer social skills (Rodenburg et al., 2005a) in comparison to peers. These youth may also experience peer stigmatization, such that same-aged peers have been found to be more reluctant toward developing a friendship with AWE (Cheung and Wirrell, 2006).

Recent theory has highlighted the importance of not focusing solely on impairments in functioning and symptoms indicative of mental health problems, but also on positive behaviors, feelings, and functioning (Keyes, 2002, 2007). This perspective emphasizes focusing on a person's well-being and mental wellness. Flourishing represents a positive mental health construct and has been defined as "to live within an optimal range of human functioning, one that connotes goodness, generativity, growth, and resilience" (Fredrickson and Losada, 2005, p. 678).

Sociodemographic factors have been related to variations in the prevalence of flourishing. Research conducted among adults suggests gender differences in psychological well-being with males and females displaying unique strengths in certain areas (Roothman et al., 2003). For example, males experience higher self-concept and positive automatic thoughts, while females show higher religious well-being and expression of affect. Within adolescents, mood and anxiety disorders are more prevalent among females (Merikangas et al., 2010), and occurrence of these mental health disorders may be a barrier to reaching positive mental health and flourishing. Age differences in flourishing have also been noted. Among adults, older age groups have the highest flourishing (Keyes and Westerhof, 2011). However, a study with adolescents found flourishing to be the most common mental health status in youth 12–14 years (approximately 49% of youth were flourishing), while being only moderately mentally healthy was the most common mental health status among youth 15–18 years (with only approximately 40% of youth meeting criteria for flourishing; Keyes, 2006). Regarding racial and ethnic differences in flourishing, African American adults display higher rates of flourishing than their Caucasian peers (Keyes, 2009).

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Positive development, thriving, and flourishing among AWE may be negatively impacted by their greater risk for poor behavioral, mental health, academic, social, and quality of life outcomes, especially during adolescence when a substantial portion of development, independence, and self-definition occurs. Parental factors may also have a significant impact on adolescent development and thriving (e.g., Paley et al., 2000). Morris et al. (2007) found parental displays of anger and negative parenting were related to poorer youth emotion regulation. This is particularly concerning for development in AWE, given parents of youth with epilepsy experience increased parenting stress (e.g., Chiou and Hsieh, 2008; Wirrell et al., 2008). In fact, familial and parental factors have been related to psychopathology and adjustment in AWE (Hodes et al., 1999; Rodenburg et al., 2005b).

The current study investigated whether adolescents with a seizure disorder/epilepsy display lower rates of flourishing than their peers without seizures. The relations among adolescent demographics, symptom severity, and flourishing also were examined to determine risk factors for lower flourishing as a guide for targeted prevention and intervention efforts.

Material and methods

Data source and participants

Data were drawn from the National Survey of Children's Health (NSCH) 2011–2012 (Child and Adolescent Health Measurement Initiative [CAHMI], 2013a). This is a national telephone based survey in the US in which parents and legal guardians provided data about one of their children's health and development. Families were recruited using cross-sectional list-assisted random digit dial samples of landline telephone and cellphone numbers from all 50 US states including the District of Columbia and the US Virgin Islands. Households with a child under 18 years and able to complete the phone interview in English, Spanish, Mandarin, Cantonese, Vietnamese, or Korean met study inclusion criteria. If multiple children lived in the home, one child was selected at random, and parents completed the interview about this single child. The interview was completed with the parent or guardian with the most knowledge of the child's health. Average interview length was approximately 33 min. Interview completion rate was 54.1% for the landline sample and 41.2% for the cell-phone sample. A complete description of the study methodology has been provided elsewhere (CAHMI, 2013a).

The current study was approved by the authors' university-based institutional review board and permission was provided by the Data Resource Center for Child and Adolescent Health to conduct analyses (CAHMI, 2013a,b). The NSCH 2011–2012 resulted in 95,677 interviews. Interviews were completed for 23,799 adolescents between the ages of 14 to 17 years of age and were included in the current analyses. One hundred and eighty-two of these adolescents currently had epilepsy or a seizure disorder.

Description of study variables

Parent-report of youth well-being or thriving, which is termed by the NSCH as "flourishing", (CAHMI, 2013a) was used as the outcome variable. Three questions were developed to assess flourishing by an expert panel, including professionals with a background in survey methodology, children's health, community organizations, and family leaders, in conjunction with input from a public comment period (CAHMI, 2013a). The three questions assessed the adolescent's (1) interest and curiosity in learning new things, (2) staying calm and in control when facing a challenge, and (3) following through with what he/she says he or she will do. Interviewers recorded parent responses to each of the aforementioned questions on a 5-point scale (never, rarely, sometimes, usually, or always). A flourishing composite score was created from the three items. For this score a "1" indicated that the parent provided an answer of "usually" or "always" to one of the items. A "2" or "3" indicated that a parent had provided a response of usually or always to 2 or 3 of the questions, respectively. Since this outcome variable represented a frequency count of endorsed items rather than a categorical response, this variable was conceptualized as a continuous variable with 0 representing no flourishing items endorsed.

Parents reported whether they felt angry with their child on a 5-point scale (never, rarely, sometimes, usually, always). Parents also rated how well they cope with the day to day demands of parenthood on a 4-point scale (very well, somewhat well, not very well, not very well at all). The child's epilepsy was rated by parents as mild, moderate, or severe. For inclusion in analyses, all categorical predictor variables were dichotomized.

Table 1
Participant demographics.

	Adolescents with epilepsy (n = 182) n (%)	Adolescents without epilepsy (n = 23,617) n (%)
Sex		
Boy	94 (52%)	12,435 (53%)
Girl	88 (48%)	11,156 (47%)
Missing	0 (0%)	26 (<1%)
Age		
14 yrs	48 (26%)	5317 (23%)
15 yrs	42 (23%)	5719 (24%)
16 yrs	40 (22%)	6222 (26%)
17 yrs	52 (29%)	6359 (27%)
Race		
White	139 (76%)	17,826 (75%)
Black	19 (10%)	2264 (10%)
Other	23 (13%)	3007 (13%)
Missing	1 (1%)	520 (2%)

Data analyses

Data were assigned a sampling weight for the probability of selecting telephone numbers for the linear regression analysis and t-test. A t-test was conducted to examine whether flourishing differed between adolescents with and without a seizure disorder/epilepsy. A linear regression analysis was used to determine whether flourishing was related to parent coping, parent anger, severity of epilepsy, and adolescent demographic variables (sex, age in years, race). Prior to running analyses, the normality and distribution of the outcome variable (i.e., flourishing) was assessed, and the variable was found to be normally distributed. List-wise deletion was used if missing data was present.

Results

Participant demographics are presented in Table 1; parent report of feeling angry with their child is presented in Table 2. Results of a t-test indicated a statistically significant difference in flourishing between adolescents with and without a seizure disorder/epilepsy (t = 7.71, p < .001). Adolescents with a seizure disorder/epilepsy displayed lower flourishing (M = 1.57, SD = 1.11)

Table 2
Frequency of parent anger toward their adolescent with epilepsy.

	n (%)
Never	58 (32%)
Rarely	61 (34%)
Sometimes	55 (30%)
Usually	6 (3%)
Always	2 (1%)