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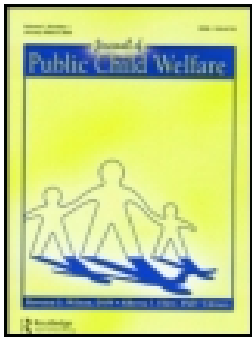


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Resilient Outcomes among Youth Aging-Out of Foster Care: Findings from the National Youth in Transition Database

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ABSTRACT

The period of transition from foster care to independent living is frequently associated with poor outcomes. While some studies have conveyed patterns of resilience among transition-age foster youth, additional research is needed to examine its stability over time. The present study used data from the National Youth in Transition Database (NYTD) and the Adoption and Foster Care Analysis and Reporting System (AFCARS) to examine the rates and stability of positive, or “resilient” outcomes among foster youth at ages 19 and 21 ($N = 4,631$). We included domains such as education, employment, and risky behaviors in our assessment of resilient outcomes. About 40% of youth met the criteria for resilience at ages 19 and 21 (i.e., “sustained resilience” group), an additional 28% met the criteria for resilience at one time point only (i.e., “periodic resilience” group), and 30% did not meet the criteria for resilience at any point (i.e., “sustained non-resilience” group). Several risk, protective, and child welfare factors were associated with manifestations of resilient outcomes during the period of transition to adulthood. Implications for policy, practice, and research are discussed.

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Resilience; aging-out; risk and protective factors; child welfare; secondary data analysis

Introduction

Older youth in foster care face myriad challenges as they emancipate from the child welfare system and begin living independently (Courtney et al., 2016; Naccarato, Brophy, & Courtney, 2010; Stott & Gustavsson, 2010). According to recent research, many experience educational and vocational difficulties (Simmel, 2013; Courtney et al., 2016; Day, Dworsky, Fogarty, & Damashek, 2011; Hook & Courtney, 2011; Naccarato et al., 2010), housing instability, and homelessness (Curry & Abrams, 2015; Dworsky & Courtney, 2009; Shah et al., 2017), dependence on public assistance (Byrne et al., 2014; Courtney et al., 2007), and early pregnancy and parenthood (Eastman, Palmer, & Ahn, 2019; Svoboda, Shaw, Barth, & Bright, 2012). Some youth also report emotional and behavioral challenges, such as substance use and misuse (Narendorf & McMillen, 2010), mental health concerns (Havlicek, Garcia, & Smith, 2013;

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McMillen et al., 2005), and criminal justice involvement (Cusick, Havlicek, & Courtney, 2012).

Early research on emancipating foster youth has focused predominantly on risk and maladaptation among this population (Brandford & English, 2004; McMillen & Tucker, 1999). Nevertheless, not all youth exhibit negative outcomes as they emancipate from the child welfare system (Shpiege, 2016; Daining & DePanfilis, 2007). Many show positive or “resilient” outcomes during this vulnerable period, including adequate educational and vocational attainment, stable housing, and avoidance of risky behaviors (Courtney, Hook, & Lee, 2012; Daining & DePanfilis, 2007; Jones, 2012; Miller, Paschall, & Azar, 2017; Yates & Grey, 2012). Although research on resilience among child welfare-involved youth has grown substantially in recent years (e.g., Miller et al., 2017; Yates & Grey, 2012), additional studies are needed to examine the stability of resilient outcomes over time, and the factors associated with sustained resilience as youth transition to adulthood.

Defining resilience among vulnerable populations

The phenomenon of resilience among vulnerable children and youth has been studied extensively since early 1970s (Masten, 2011; O’Dougherty, Masten, & Narayan, 2013). Although the concept of resilience has been defined in various ways over the past decades, we use this term to refer to the presence of positive developmental outcomes among young people who have survived adversity. This view contrasts with early conceptualizations of resilience as an individual trait (Anthony, 1974; Cohler, 1987), and aligns with a process model of resilience, in which it is conceptualized as a “state” or a successful outcome (Luthar, 2006; Masten & Powell, 2003; Reich, Zautra, & Hall, 2010). In accordance with this view, we use the working definition of Masten and Powell (2003), who considered resilience to be “a pattern of positive adaptation in the context of significant risk or adversity” (Masten & Powell, 2003, p. 4).

Researchers have sought to better understand how resilient outcomes may unfold among individuals defined as “high-risk” based on personal or environmental factors, such as poverty, parental psychopathology, or exposure to trauma (Luthar, 2006; Masten, 2011; O’Dougherty et al., 2013). The presence of resilience among these high-risk persons is generally indicated by an effective negotiation of stage-salient developmental tasks, as well as avoidance of harmful outcomes commonly linked to the adversity experienced (Masten & Powell, 2003; O’Dougherty et al., 2013; Yates & Grey, 2012). As noted above, we believe that the development of resilience is best understood as a dynamic state that is a function of the social ecology, or the interactions between individuals and their environments (Ungar, 2013), and not as an individual quality.

Several conceptual frameworks have been proposed to understand the development of resilience, most of which have relied on Bronfenbrenner's view of development as embedded in multiple environmental contexts (Fraser, Kirby, & Smokowski, 2004; Luthar, 2006; Masten, 2001). Such frameworks propose that resilience is determined by the interplay between risk and protective processes at different levels of the social ecology, including the individual, the family, and the community (Masten & Coatsworth, 1998; O'Dougherty et al., 2013; Yates & Grey, 2012). According to this conceptualization, the probability of resilient outcomes *increases* when individuals experience less risk, or possess certain protective factors that may offset the effects of risk (Masten, 2001; O'Dougherty et al., 2013). In contrast, the probability of resilience *decreases* when individuals experience abundant risk and possess few protective factors that may provide a buffering effect (Masten, 2011; O'Dougherty et al., 2013). Overall, an ecological perspective on resilience recognizes that the ability of individuals to achieve positive developmental outcomes depends, in large part, on the capacity of their social networks to provide meaningful resources, and individuals themselves should not be blamed for failing to thrive in environments devoid of opportunity (Ungar, 2013).

Resilience among current and former foster youth

Early research on emancipating foster youth has focused primarily on the struggles these young people encountered in the transition to adulthood, including difficulties with housing, stable employment, and post-secondary education (Brandford & English, 2004; McMillen & Tucker, 1999). More recently, the presence of resilient outcomes among these youth has received increased attention, though many studies remained narrow in scope (Daining & DePanfilis, 2007; Hass & Graydon, 2009; Jones, 2012; Samuels & Pryce, 2008; Yates & Grey, 2012). For instance, several scholars defined resilience based on a single indicator only, such as postsecondary educational attainment or psychological health (e.g., Edmond, Auslander, Elze, & Bowland, 2006; Hass & Graydon, 2009; Strolin-Goltzman, Woodhouse, Suter, & Werrbach, 2016). This approach has been criticized for being incomplete, as successful functioning in one domain may come at the expense of vulnerability in other areas (Shpiege, 2016; Merdinger, Hines, Lemon, & Wyatt, 2005; Yates & Grey, 2012). To better understand resilience among youth "aging-out" of foster care, a multidimensional approach is necessary, incorporating both the achievement of major developmental tasks of young adulthood, and avoidance of harmful outcomes linked to experiencing childhood maltreatment and involvement with the child welfare system (Shpiegel, 2016; Masten & Tellegen, 2012; Yates & Grey, 2012).

Several studies of foster youth conceptualized resilience as a multidimensional construct. An early study by Shpiegel (2016) evaluated resilience among youth ages 19–24, based on a composite score combining six domains: education, employment, and avoidance of early parenthood, substance use, homelessness, and criminal activity. Findings revealed that about two-thirds of youth showed either moderate or high resilience (i.e., attaining some developmental milestones while avoiding most outcomes that would place youth at greater risk for experiencing harm). A subsequent study by Jones (2012) defined resilience based on educational and vocational attainment, housing stability, and avoidance of substance abuse and criminal involvement, while also incorporating optimism and preparedness for independent living. The rates of resilience in this study were comparable to those found by Daining and DePanfilis (2007), with approximately two-thirds of youth ages 17–21 showing moderate or high resilience (Jones, 2012). Finally, a recent study by Shpiegel (2016) evaluated resilience at age 17, using a composite score combining educational attainment, and avoidance of teen pregnancy, homelessness, mental health problems, substance use, and criminal involvement. Consistent with prior studies, findings pointed to a relatively large proportion of youth who were either moderately or highly resilient at a single point in time (Shpiegel, 2016).

In other studies, resilient subpopulations have emerged when youths' functional outcomes were evaluated using *person-oriented* methods, which allow researchers to identify homogenous subgroups based on specific outcome indicators (Shpiegel et al., 2020, 2015; Courtney et al., 2012; Keller, Cusick, & Courtney, 2007; Miller et al., 2017; Yates & Grey, 2012). In two studies using data from the Midwest Evaluation of the Adult Functioning of Former Foster Youth, latent class analysis was used to identify subgroups of youth based on indicators, such as education, employment, parenthood, and problem behaviors (Courtney et al., 2012; Keller et al., 2007). In both studies, a sizable group of youth (about 35%) exhibited positive developmental outcomes across most outcome indicators. Similarly, in a study of foster youth from California, over 40% of participants were designated as resilient based on indicators such as educational, vocational and relational competence, civic engagement, and behavioral and emotional functioning (Yates & Grey, 2012). In a sample of youth from Missouri, about 39% were classified as resilient based on educational and vocational attainment, absence of risky behaviors (e.g., arrests, incarceration, pregnancy), and living situation (Miller et al., 2017). Finally, in two investigations using a national sample of foster youth, a resilient subgroup emerged for all youth at age 17 (39%; Shpiegel & Ocasio, 2015) and for adolescent mothers at age 19 (43%; Shpiegel et al., 2020). In both studies, resilience was defined based on multiple indicators, such as education, employment, and avoidance of homelessness, substance abuse referrals, and incarceration. Collectively, the studies described above indicate that

a substantial proportion of foster youth exhibits resilient outcomes during the period of transition to adulthood.

Risk and protective factors associated with resilience among foster youth

The findings described above present a fairly consistent picture regarding the prevalence of resilience among foster youth; however, there has been less consistency regarding its specific correlates (Daining & DePanfilis, 2007; Jones, 2012; Yates & Grey, 2012). Some studies have focused on individual factors, such as participation in extra-curricular activities or spirituality (e.g., Haight, Finet, Bamba, & Helton, 2009; Hass & Graydon, 2009; Hines, Merdinger, & Wyatt, 2005), while others emphasized factors related to the child welfare system, such as minimizing placement instability and avoiding institutional placements (e.g., Garcia, Pecora, Harachi, & Aisenberg, 2013; Gypen, Vanderfaellie, De Maeyer, Belenger, & Van Holen, 2017; Keller et al., 2007; Newton, Litrownik, & Landsverk, 2000; Stott, 2012). Although specific findings vary, several environmental factors have emerged as consistently associated with positive outcomes during the period of transition to adulthood. For instance, social support in general, and the presence of adult mentors, in particular, were linked to improved functioning during late adolescence and early adulthood (Daining & DePanfilis, 2007; Greeson, 2013; Gypen et al., 2017; Jones, 2012; Yates & Grey, 2012). Qualitative studies reinforce such findings by documenting the emotional, instrumental, and informational support adult mentors provide to emancipating foster youth (Greeson & Bowen, 2008; Munson, Smalling, Spencer, Scott, & Tracy, 2010). In addition, placement in stable, family-based settings for extended periods, and remaining in foster care past the age of 18 were linked to positive developmental outcomes in numerous investigations (e.g., Courtney et al., 2016; Gypen et al., 2017; Stott, 2012). Conversely, factors such as residing in group homes or institutions, multiple placement disruptions, a history of running away, preexisting mental health challenges, and early parenthood were frequently associated with less successful outcomes as youth transitioned to independent adulthood (Shpiegel & Cascardi, 2018; Dworsky & Gitlow, 2017; Havlicek et al., 2013; Hook & Courtney, 2011; Stott, 2012).

Gaps in research and the contribution of the present study

Despite a recent expansion of research on resilience among current and former foster youth, important gaps remain. First, existing studies rely predominantly on regional or state-specific samples (e.g., Courtney et al., 2012; Daining & DePanfilis, 2007; Jones, 2012; Miller et al., 2017; Yates & Grey, 2012), while national estimates are lacking. Second, nearly all existing investigations examine resilience at a single time point (e.g., Daining & DePanfilis, 2007; Jones, 2012; Yates & Grey, 2012), and the stability of resilience over time

is not well understood. For instance, two prior studies that used national samples of foster youth discussed resilience at age 17 only (Shpiegel & Ocasio, 2015), and age 19 only (Shpiegel et al., 2020), with no longitudinal examinations of its stability over time. The same applies to studies using various regional samples, with virtually no examinations of resilience beyond a single time point (Daining & DePanfilis, 2007; Jones, 2012; Yates & Grey, 2012). Examining whether resilience is sustained over time, and assessing the risk and protective factors associated with its stability, are important next steps for the field. To address these gaps, the current study utilizes data from a large, national sample of current and former foster youth to:

- (1) Examine the prevalence of resilience at ages 19 and 21, and explore its stability across both time points. To assess resilience, the following indicators were used at each point: school enrollment, employment, and avoidance of homelessness, substance abuse referrals, and incarceration.
- (2) Examine the impact of risk and protective factors (i.e., mental health challenges, childbirth or fathering a child, and presence of a supportive adult) and child welfare factors (i.e., placement type and stability, length of time in foster care, and foster care status at age 19) on the likelihood of resilience across ages 19 and 21.

Methods

Dataset and procedure

The primary data source used in the current study was the National Youth in Transition Database (NYTD). This database was created by the John H. Chafee Foster Care Independence Program (CFCIP), and was designed to track *services* provided through CFCIP and collect *outcome measures* to assess the effectiveness of the program. The first cohort of NYTD was established in federal fiscal year (FFY) 2011; additional cohorts were established every three years thereafter. All 50 states, the District of Columbia and Puerto Rico are required to submit information to NYTD during the designated reporting periods (NDACAN, 2019).

The present study focused on the outcome component of the *second* NYTD cohort, which included information on all youth who reached their 17th birthday and were in foster care during FFY 2014. States collected three phases of outcome data for each youth – a baseline survey during the year in which they turned 17 (i.e., FFY 2014), and two follow-up surveys when they turned 19 and 21 (i.e., FFY2016 and FFY2018).

All youth who turned age 17 in FFY2014 and were in foster care within a 45-day period beginning on their birthday were eligible to complete the baseline

NYTD survey. States could choose the manner of administering the survey (e.g., in person, via the Internet, over the phone), as long as it was administered directly to the youth. Those who at least partially completed the baseline survey during the designated 45-day window were included in *FFY2014 cohort* and followed at ages 19 and 21. The follow-up surveys were administered to the youth during a six-month reporting periods which contained their 19th and 21st birthdays. Some states invited all youth in the FFY 2014 cohort to complete the follow-up surveys, while others used probabilistic sampling to determine the follow-up population (i.e., randomly selected some youth from the FFY2014 cohort, using a pre-determined formula included in the NYTD regulations).¹ The national response rate for the baseline survey was 69% ($N = 16,480$); the response rates for the follow-up surveys at ages 19 and 21 were 72% and 64%, respectively.² Of note, response rates varied widely by state, possibly due to differences in data collection procedures. For additional information about the NYTD design and procedures, see (National Data Archive on Child Abuse and Neglect (NDACAN), 2019).

The second data source used in the present study was the Adoption and Foster Care Analysis and Reporting System (AFCARS) for FFY2014 (i.e., data collected approximately at the same time as the NYTD *baseline* survey). AFCARS is a federally mandated data collection system that provides case-level information on all children in foster care in the United States. The AFCARS dataset includes episode-level information about youths' child welfare histories, such as length of time in care, placement types, and placement stability (for detailed information about AFCARS, see NDACAN, 2016). For the purpose of the present study, data from NYTD and AFCARS were combined using a unique child identifier assigned by the state agencies.

Participants

The final sample for the present study included all youth who completed the three NYTD surveys at ages 17, 19 and 21, and had valid data on all indicators used to define resilience (i.e., school enrollment, employment, homelessness, substance abuse referrals, and incarceration). Youth from all states, the District of Columbia and Puerto Rico were represented in the final sample ($N = 4,631$), with an overrepresentation of females as compared to males (57% and 43%, respectively). Approximately 40% of the participants identified as Non-Hispanic White ($n = 1,799$), 33% identified as Black ($n = 1,510$), 23% identified as Hispanic (irrespective of race; $n = 1,061$), 3% identified as American Indian or Alaska Native ($n = 153$) and 2% identified as Asian, Hawaiian or Other Pacific Islander ($n = 78$). For approximately 1% of youth ($n = 30$), race/ethnicity information was not available. Of those included in the final sample, about 60% have been discharged from foster care by age 19.

When compared to the overall population of youth in the NYTD database, the youth included in the present sample were more likely to be female (57% vs. 49%) and Hispanic (23% vs. 20%), and less likely to be Non-Hispanic White (39% vs. 42%). Additionally, those who met the inclusion criteria for the present study were significantly more likely to be in foster care at age 19 (41% vs. 30%).

Measures

Three sets of variables were included in the present study: (1) outcome indicators used to define resilience at ages 19 and 21; (2) risk and protective factors, including mental health challenges at age 17, childbirth, or fathering a child by age 19, and presence of a supportive adult at age 19; and (3) child welfare histories, including placement type and stability, length of time in foster care during the latest removal by age 17, and foster care status at age 19. Information about resilience indicators and risk and protective factors was obtained from the NYTD dataset³; information about child welfare histories was obtained from AFCARS.⁴ Missing data were present for several variables (generally no more than 5% for each), modestly reducing the sample size for some analyses. A brief description of the measurement strategies is presented below.

Resilience at ages 19 and 21

Resilience at ages 19 and 21 was based on the following outcome indicators at each time point: connection to school or employment, and avoidance of homelessness, substance abuse referrals, and incarceration during the previous two years (i.e., between the ages of 17–19 for resilience at age 19; between the ages of 19–21 for resilience at age 21). Each indicator was coded as absent or present.

Connection to School or Employment: Youths were considered to be connected to school or employment if they reported being enrolled in school or employed at ages 19 and 21. School enrollment was defined as attending high school, GED classes, post-secondary vocational training, or college at the time of the interview. Employment status was defined as employed full time (35 hours or more), employed part time (34 hours or less), or not employed. The rationale for combining these variables into a single indicator was that an absence of one did not necessarily suggest decreased resilience, as long as the other was present (e.g., for youths enrolled in school full time, not having employment may be appropriate, and does not suggest negative developmental outcomes).

Homelessness. Participants were considered to have experienced homelessness if they had no regular or adequate place to live at any time point during the past two years. The definition of homelessness included living in a car, on the street, or staying in a homeless or other temporary shelters.

Substance abuse referral. This indicator was defined as having been referred for an alcohol or drug abuse assessment or counseling during the past two years, including a self-referral, or a referral by a social worker, school staff, physician, mental health worker, foster parent, or another adult.

Incarceration. Participants reported if they had been confined in a jail, prison, a correctional facility, or juvenile or community detention facility during the past two years, in connection with allegedly committing a felony or a misdemeanor.

Constructing resilience variables. At the first step, two dichotomous variables were constructed to define resilience at ages 19 and 21. Youth who were connected to school or employment and did not report homelessness, substance abuse referrals, or incarceration during the previous two years were considered to be *resilient* at the corresponding time period. To assess the *stability* of resilience across both time periods, the two dichotomous variables were combined to create an overall resilience variable coded as following: (a) youth who met the criteria for resilience at ages 19 *and* 21 were considered to exhibit “sustained resilience” (b) youth who met the criteria for resilience at one time point only (i.e., at age 19 *or* 21) were considered to exhibit “periodic resilience” and; (c) youth who did not meet the criteria for resilience at ages 19 or 21 were considered to exhibit “sustained non-resilience”. Of note, the overall resilience variable across ages 19 and 21 served as the dependent variable in all bivariate and multivariate analyses.

Risk and protective factors

Risk factors included mental health challenges at age 17 and parenthood by age 19, whereas a protective effect was indicated by the presence of a supportive adult at age 19. Mental health challenges were assessed using the AFCARS “emotionally disturbed” variable, referencing diagnoses such as anxiety disorders, depressive disorders, conduct disorders, and personality disorders at age 17 (for a more detailed definition of this variable, see National Data Archive on Child Abuse and Neglect (NDACAN), 2016). Parenthood status was assessed using the NYTD’s “children” variable, indicating whether a youth had given birth or fathered a child that was born (i.e., those who responded “yes” at ages 17 or 19 were designated as parents). Finally, the presence of a supportive adult was assessed using the NYTD’s “connection to adult” variable, indicating whether the youth had at least one adult who they could reach out to for advice or guidance when there was a decision to make or a problem to solve, or when celebrating personal achievements. This definition included, but was not limited to, adult relatives, parents, and foster parents, and did *not* include spouses, partners, boyfriends or girlfriends, and current caseworkers.

Child welfare factors

Child welfare factors included placement type, placement stability, and length of time in foster care by age 17, as well as youths' foster care status at age 19. Placement type at age 17 included the following categories: relative foster home, non-relative foster home, congregate care (group home or institution), pre-adoptive home, supervised independent living, trial home visit, and run-away. Placement stability was assessed by the number of placements during the latest removal episode by age 17. Length of time in foster care was originally defined as the number of *days* spent in care during the latest removal episode by age 17; however, for clarity of interpretation, it was recoded to represent the number of *months* spent in care. Finally, foster care status was coded as following: still in foster care at age 19, or discharged from foster care by age 19.

Analytic strategy

All analyses were conducted in SPSS, version 25. At the first step, descriptive statistics were used to explore the prevalence and stability of resilience across ages 19 and 21, as well as the risk, protective, and child welfare factors included in the present study. At the next step, bivariate analyses (i.e., chi-square tests) were used to examine demographic differences in resilient functioning by gender and race/ethnicity. At the final step, multinomial logistic regression analysis was used to explore the contribution of risk, protective, and child welfare factors to the likelihood of sustained and periodic resilience across ages 19 and 21, controlling for youths' gender and race/ethnicity.

Results

Resilience rates and risk, protective, and child welfare factors

The prevalence rates of each resilience indicator at ages 19 and 21 are shown in [Table 1](#). At age 19, more than two-thirds of youths were in school or employed, and over 80% did not report homelessness, substance abuse referrals, or incarceration during the previous two years. At age 21, over 70% were in school or employed and did not experience homelessness, while over 80% did not report substance abuse referrals or incarceration. The proportion of youth who met the criteria for resilience based on all indicators combined (i.e., were in school or employed, and did not experience homelessness, substance abuse referrals, and incarceration) was 59% at age 19, and 55% at age 21. When the stability of resilience across both periods was evaluated, 42% exhibited sustained resilience (i.e., met the criteria for resilience at ages 19 *and* 21); 28% exhibited periodic resilience (i.e., met the criteria for resilience at age 19 *or* 21),

Table 1. Prevalence rates of resilience indicators, and risk, protective, and child welfare factors ($N = 4,631$).

Variables	% or M, SD
Resilience Indicators at age 19	76.4%
Connection to School or Employment	80.5%
Absence of Homelessness	87.0%
Substance Abuse Referrals	82.0%
Incarceration	59.1%
<i>Overall resilience at age 19</i>	
Resilience Indicators at age 21	71.5%
Connection to School or Employment	72.3%
Absence of Homelessness	89.6%
Substance Abuse Referrals	82.3%
Incarceration	54.8%
<i>Overall resilience at age 21</i>	
Risk and Protective Factors	36.9%
Mental Health Challenges at age 17	12.9%
Childbirth/Fathering child by age 19	93.1%
Supportive Adult at age 19	
Child Welfare Variables	13.6%
Placement Type	44.1%
<i>Relative foster home</i>	32.3%
<i>Non-relative foster home</i>	1.7%
<i>Congregate care</i>	2.6%
<i>Pre-adoptive home</i>	3.5%
<i>Supervised Independent Living</i>	2.2%
<i>Trial Home Visit</i>	M = 5.33, SD = 5.54
<i>Runaway</i>	M = 42.08, SD = 40.52
Placement Stability (# of placements)	41.2%
Length of Time in Care (in months)	
In Foster Care at age 19	

Note: Missing data are present for some risk, protective, and child welfare factors (between 1% and 4%).

and 30% exhibited sustained non-resilience (i.e., did not meet the criteria for resilience at either point).

The prevalence of risk factors, protective factors, and child welfare variables examined in the present study are also shown in [Table 1](#). Approximately 13% of youths reported childbirth or fathering a child, more than 90% reported having a supportive adult, and over one-third had mental health challenges. At age 17, over 40% of youth were placed in non-relative foster homes, about one-third were placed in group homes or institutions, 13% were placed with relatives, less than 5% were placed in pre-adoptive homes, supervised independent living, or trial home visits, and approximately 2% were designated as a runaway. Additionally, the youth in the present sample experienced an average of five different placements during the latest removal episode, and remained in foster care for an average of 42 months.

Demographic differences in resilience rates

Results from chi-square analyses revealed significant differences in rates of overall resilience by gender ($\chi^2 = 44.5, p < .001$) and race/ethnicity ($\chi^2 = 49.3,$

$p < .001$), as summarized in Table 2. Males were less likely than females to exhibit sustained resilience (38% vs. 46%, respectively) and more likely to exhibit sustained non-resilience (35% vs. 26%, respectively), though no differences have emerged for periodic resilience (27% and 28%, respectively). The differences by race/ethnicity were relatively minor for Non-Hispanic White, Black, and Hispanic youth (see Table 2 for additional details); however, significant differences have emerged for Native American or Alaska Native youth, as well as for Asians, Hawaiians, and Other Pacific Islanders. Specifically, Native American/Alaska Native youth had the *lowest* rates of sustained resilient outcomes (24%) and the *highest* rates of sustained non-resilience (51%) of all racial and ethnic groups. In contrast, Asians, Hawaiians, and Other Pacific Islanders had the *highest* rates of sustained resilient outcomes (54%) and the *lowest* rates of sustained non-resilience (23%) of all groups. The rates of periodic resilience were relatively similar for all racial and ethnic categories.

Impact of risk, protective, and child welfare factors on resilience

Table 3 presents findings from a multinomial logistic regression analysis examining the impact of risk, protective, and child welfare factors on the likelihood of sustained and periodic resilience (with sustained non-resilience serving as the reference category). Findings revealed that being male (OR = .60, $p < .001$), identifying as Native American or Alaska Native (OR = .32, $p < .001$), having mental health challenges at age 17 (OR = .65, $p < .001$) and giving birth or fathering a child by age 19 (OR = .64, $p = .001$) were associated with *decreased* likelihood of sustained resilience across ages 19 and 21.⁵ In contrast, having a supportive adult at age 19 was linked to *increased* likelihood of sustained resilience (OR = 2.84, $p < .001$). When child welfare factors were examined, youth placed in pre-adoptive homes (OR = 2.21, $p = .03$) or with relatives (OR = 1.31, $p = .04$) at age 17 were more likely to exhibit sustained resilience, whereas those placed in group homes or institutions (OR = 39, $p < .001$), trial home visits (OR = .32, $p < .001$), or designated as runaway (OR = .14, $p < .001$) were less likely to exhibit sustained resilience.⁶ Finally, increased placement instability (OR = .88, $p < .001$) and being

Table 2. Resilience by race/ethnicity ($N = 4,601$).

Shpiege, 2016	Shpiege, 2016	Shpiege, 2016	Shpiege, 2016
Non-Hispanic White	42.2%	27.9%	30.1%
Hispanic	44.4%	29.8%	25.8%
Black	42.1%	27.1%	30.8
American Indian/Alaskan Native	23.5%	25.5%	51.0%
Asian or Hawaiian/Other Pacific Islander	53.8%	23.1%	23.1%

Notes: Sustained Resilience = met criteria for resilience at ages 19 and 21; Periodic Resilience = met criteria for resilience at ages 19 or 21; Sustained Non-Resilience = did not meet criteria for resilience at either age.

Table 3. Multinomial logistic regression predicting sustained and periodic resilience across ages 19 and 21 ($N = 4,226$).

Variables	Sustained Resilience		Periodic Resilience	
	p value	OR (95% CI)	p value	OR (95% CI)
Demographics	<.001	.60 (.51 – .71)	<0.001	.72 (.61 – .86)
Gender (Male)	=.793	.97 (.78– 1.20)	=.415	1.10 (.89– 1.37)
Race/Ethnicity~	=.217	.88 (.73– 1.07)	=.276	.89 (.73– 1.09)
Hispanic	<.001	.32 (.20 – .51)	=.006	.54 (.34 – .84)
Black	=.502	1.25 (.65– 2.40)	=.730	.88 (.42– 1.81)
American Indian/Alaska Native				
Asian or Hawaiian/Other Pacific Islander				
Risk and Protective Factors	<.001	.65 (.55 – .77)	=.002	.76 (.64 – .90)
Mental health challenges at age 17	=.001	.64 (.50 – .83)	=.646	.94 (.74– 1.20)
Childbirth/Fathering a child by age 19	<.001	2.84 (2.05– 3.94)	<.001	2.28 (1.66– 3.13)
Supportive Adult at age 19				
Child Welfare Variables	=.046	1.31 (1.00– 1.72)	=.028	1.38 (1.03– 1.84)
Placement Type^	<.001	.39 (.32 – .47)	<.001	.70 (.57 – .84)
Relative foster home	=.030	2.11 (1.07– 4.16)	=.063	1.98 (.96– 4.09)
Congregate care	=.635	.88 (.53– 1.46)	=.886	.96 (.56– 1.63)
Pre-adoptive home	<.001	.32 (.20 – .51)	=.004	.52 (.33 – .81)
Supervised Independent Living	<.001	.14 (.07 – .27)	<.001	.36 (.21 – .61)
Trial Home Visit			=.045	
Runaway				
Length of time in care (in months)	<.001	1.011 (1.008– 1.013)	<0.001	1.003 (1.000– 1.006)
Discharged from foster care by age 19	<.001	.36 (.30 – .43)		.49 (.40 – .59)

Notes: Sustained Resilience = met criteria for resilience at ages 19 and 21; Periodic Resilience = met criteria for resilience at ages 19 or 21 (reference category is sustained non-resilience, defined as not meeting the criteria for resilience at either age (i.e., 19 or 21).

~Reference category is non-Hispanic White; ^Reference category is placement in non-relative foster home

discharged from foster care by age 19 ($OR = .36, p < .001$) were associated with decreased likelihood of sustained resilience; however, spending a longer time in foster care during the latest removal episode was associated with increased likelihood of sustained resilience ($OR = 1.01, p < .001$).

The findings described above remained similar, albeit less pronounced, when periodic resilience was examined. Being male ($OR = .72, p < .001$), identifying as Native American or Alaska Native ($OR = .54, p = .006$) and having mental health challenges at age 17 ($OR = .76, p = .002$) were associated with decreased likelihood of periodic resilience; though the impact of childbirth or fathering a child by age 19 was no longer significant. The presence of a supportive adult at age 19 remained significantly associated with higher likelihood of periodic resilience ($OR = 2.28, p < .001$). Finally, placement with relatives at age 17 ($OR = 1.38, p < .001$) and longer stay in foster care during the latest removal episode ($OR = 1.00, p = .04$) were associated with increased likelihood of periodic resilience, while being discharged from foster care by age 19 ($OR = .49, p < .001$), higher placement instability ($OR = .97, p = .002$), and placement in group homes or institutions ($OR = .70, p < .001$), trial home visits ($OR = .52, p = .004$) or runaway ($OR = .36, p < .001$) were associated with decreased likelihood of periodic resilience.

Discussion

The present study examined resilient outcomes among transition-age foster youth, and explored the risk, protective, and child welfare factors associated with sustained and periodic resilience. Consistent with prior research (Daining & DePanfilis, 2007; Jones, 2012; Miller et al., 2017; Yates & Grey, 2012), resilient outcomes were fairly common in the present sample. About 40% of youth exhibited sustained resilience across ages 19 and 21, 28% showed periodic resilience, and an additional 30% showed a consistent pattern of non-resilience. The presence of periodic resilience reinforces the notion that it should be viewed as a dynamic *state*, rather than a consistent *trait* of the individual (Masten, 2001; O'Dougherty et al., 2013), as positive developmental outcomes depend on the resources available to the youth at different time points. Overall, the interplay between risk and protective factors at different levels of the social ecology, and the shifts that occur in such processes over time, may impact the likelihood of resilient outcomes at a specific period (Masten & Coatsworth, 1998; O'Dougherty et al., 2013).

Both sustained and periodic resilience at ages 19 and 21 were associated with certain demographic factors, as well as risk, protective, and child welfare variables. Females were more likely to report resilient outcomes, in line with prior studies showing higher rates of resilience among female foster youth (Daining & DePanfilis, 2007; Hass & Graydon, 2009; Hines et al., 2005; Keller et al., 2007). This phenomenon may relate to factors, such as increased utilization of supportive services on the part of females (Okpych, 2015); though it may also be associated with the selection of specific indicators used to define resilience (e.g., the inclusion of incarceration, which is more common among males) (Shpiege, 2016). Moreover, some scholars speculate that young men are more likely to come to the attention of government systems and that professionals may respond differently to patterns of emotional and behavioral distress in young men, as compared to young women (Osgood, Foster, & Courtney, 2010).

Youth identifying as Native American or Alaska Native were less likely to exhibit resilient outcomes during the period of transition to adulthood. Prior studies have noted that indigenous youth may experience challenges as they age-out of foster care, though empirical research on this topic has been sparse (Watt & Kim, 2019). Several factors may contribute to the disparities exhibited by indigenous foster youth as compared to their non-indigenous peers, such as discriminatory or biased practices on the part of the child welfare system, and persistent poverty and dearth of employment opportunities within the Native communities (Carter, 2010; Crofoot & Harris, 2012; Sarche & Spicer, 2008; Watt & Kim, 2019). Research on indigenous populations in the United States also suggests they are at elevated risk for both mental health and substance abuse challenges, which are linked to the context of tribes' sociocultural and

political oppression and historical trauma (Brave Heart, 2003; West, Williams, Suzukovich, Strangeman, & Novins, 2012).

Among the risk, protective, and child welfare factors examined in the present study, some were linked to higher likelihood of resilient outcomes. Having a supportive adult was consistently linked to both sustained and periodic resilience, in line with prior research on the importance of support and mentorship for a successful transition to adulthood (Daining & DePanfilis, 2007; Greeson, 2013; Gypen et al., 2017; Jones, 2012; Munson et al., 2010; Yates & Grey, 2012). Certain child welfare factors were also linked to higher likelihood of resilient outcomes, including placement with relatives and in pre-adoptive homes, spending longer time in foster care, and remaining in care past the age of 18. Similar findings were reported in previous investigations, emphasizing stable, family-based placements and remaining in extended foster care as effective mechanisms for promoting positive outcomes among children and youth in care (Courtney et al., 2016; Garcia et al., 2013; Gypen et al., 2017; Keller et al., 2007; Stott, 2012).

Other factors examined in the present study were linked to lower likelihood of resilient outcomes. Youth who had been diagnosed with an emotional or behavioral disorder by age 17 were less likely to exhibit sustained and periodic resilience at ages 19 and 21, highlighting the difficulties faced by foster youth who live with mental health challenges (Havlicek et al., 2013; McMillen et al., 2005). Moreover, youth who ran away from a placement at age 17 were less likely to show sustained and periodic resilience as they transitioned to adulthood, consistent with prior studies describing the hazardous consequences of running away (Biehal & Wade, 1999; Hyde, 2005; Thompson, Bender, Lewis, & Watkins, 2008). Finally, youth who had given birth or fathered a child by age 19 were less likely to exhibit sustained, though not periodic, resilience. Several studies discussed the unique challenges of parenting foster youth, pointing, for instance, to educational and vocational difficulties and higher rates of homelessness (e.g., Combs, Begun, Rinehart, & Taussig, 2018; Shpiegel & Cascardi, 2018). At the same time, qualitative research suggested that motherhood among youth aging-out of foster care provided some young women an opportunity for a renewed sense of life purpose and relational connection (Pryce & Samuels, 2010). Based on the findings of the current study, sustaining resilient functioning over time may be challenging for parenting youth, perhaps because the demands of parenthood change frequently, and may interfere with other functional domains at critical time points (Shpiegel et al., 2020; Combs et al., 2018). These difficulties may be exacerbated further by the interruption of supportive services once youth emancipate from foster care, such as access to safe and affordable childcare (Radey, Schelbe, McWey, Holtrop, & Canto, 2016).

Finally, trial home visit placement at age 17 was linked to lower likelihood of both sustained and periodic resilience at ages 19 and 21. Reunification with

biological families is often seen as a desired goal; however, it may be linked to negative outcomes for adolescents, especially when their biological caregivers continue to struggle with issues such as addiction and mental illness (Collins, Paris, & Ward, 2008; Taussig, Clyman, & Landsverk, 2001). Youth emancipating from foster care frequently return to their biological caregivers, either because they want to reunite with family, or because they feel it is their only option (Rome & Raskin, 2019). Nevertheless, many former foster youth recognize that these relationships remain complicated and are not always supportive (Samuels, 2009). Additional research is necessary to better understand the mechanisms leading to possible negative consequences for youth returning to their biological families.

Policy and practice implications

The findings of the current study emphasize that resilience is a dynamic state, which may change based on the balance of risk and protective factors present in youths' environments (Masten, 2001; O'Dougherty et al., 2013). Recognizing the crucial role of youths' environment points to the need to intervene at the level of the environment in order to mitigate exposure to risk factors and enhance the likelihood of resilient outcomes (Ungar, 2013). To facilitate positive developmental outcomes in this population, child welfare systems should strive to build lasting protections for youth, which will not be inherently interrupted by the process of emancipation. Given the evidence that supportive adults are critical for a successful transition to adulthood, both formal and informal mentoring may represent promising interventions (Ahrens, DuBois, Richardson, Fan, & Lozano, 2008; Greeson, 2013; Gypen et al., 2017). Enrolling youth in structured mentoring programs, as well as facilitating opportunities for natural mentoring by caring adults already present in youths' lives, may promote positive outcomes during this vulnerable time period (Greeson, 2013; Greeson, Garcia, Tan, Chacon, & Ortiz, 2020; Munson & McMillen, 2009).

Youth with preexisting emotional or behavioral challenges, as well as those who parent children, should be prioritized for intensive supports and services while they are still in foster care. These youth can benefit from educational and vocational supports, housing assistance, and counseling services to address problem behaviors, and should have access to supportive persons willing to serve as mentors. In particular, developmentally appropriate mental health services that help young adults bridge the divide between child-serving and adult-serving systems of care are a vital resource for this population (Manuel et al., 2018). Enrolling youth in extracurricular activities and structured programs designed to promote educational success or employment skills (e.g., apprenticeship or internship programs) may also facilitate increased protection, by building critical skills,

as well as introducing youth to positive adult role models who may become their long-term mentors. These additional supports may be especially needed for young men of color, who face additional structural barriers in the transition to adulthood (Osgood et al., 2010). Noteworthy, resources can only promote resilience if they are perceived as meaningful (Ungar, 2013). Consequently, the input of former foster youth should be sought and incorporated into any proposed program designed to support these young people.

Our findings also indicate that child welfare experiences during adolescence may impact youths' adjustment as they transition to adulthood. Youth who experience multiple placement disruptions, as well as those who are mistreated while in foster care, continue to struggle with relational disappointment and a lack of psychological and relational security (Duval & Vincent, 2009). These findings point to the importance of minimizing any additional trauma experienced by young people who are removed from their biological families. Minimizing placement instability, preventing residential placements and running away, facilitating relative placements or adoption when possible, and encouraging youth to remain in foster care for the maximum amount of time permitted by state legislation, may represent effective strategies for promoting resilient outcomes (Courtney et al., 2016; Dworsky & Gitlow, 2017; Hook & Courtney, 2011). The recently passed Family First Prevention and Services Act of 2018 includes provisions that may support such initiatives, as this legislation places limits on the use of congregate care and promotes the use of family-oriented care, such as relative placements. Moreover, it emphasizes prevention from child welfare involvement by enhancing funding for programs such as kinship navigator, as well as mental health and substance abuse treatment programs, particularly those with an established evidence base. Finally, this legislation specifies funding for at-risk child welfare populations, such as youth who are pregnant or parenting (Family First Prevention Services Act, 2018).

Study limitations

The findings of the current study should be interpreted in light of its limitations. First, although this study was based on national data, response rates to the NYTD surveys were highly variable by state. The reasons for nonresponse are not entirely clear; however, it is possible that the most vulnerable youth were difficult to locate for the NYTD interviews, thereby inflating the rates of resilience in the current sample. This assumption is strengthened further given that the youth included in the present sample (i.e., those who completed all three NYTD interviews and had valid data on resilience indicators) were more likely to be female and to remain in foster care past the age of 18, as compared to the overall NYTD population.

Second, states could select the manner of administering the NYTD surveys to the youth (e.g., in-person, via the Internet, over the phone), as we have noted in the methods section above. The variation in the manner of survey administration may have an impact on the study findings, though its specific effects are difficult to estimate.

Third, the NYTD variables are limited in the amount of detail they provide. For instance, the definitions of homelessness, substance abuse referrals and incarceration are fairly narrow in scope, and may exclude youth with milder difficulties (e.g., youth who rely on “couch surfing” as a strategy to cope with homelessness, those who misuse substances, but have not been referred for a formal evaluation or counseling, etc.). In addition, the criteria used to define resilience may introduce bias, as they are affected by structural factors (e.g., racial bias in the criminal justice system which may affect incarceration rates for youth of color). Moreover, the current study focused solely on external indicators of resilience, such as education, employment, and avoidance of risky behaviors. Evaluating internal challenges, such as low self-esteem or disturbed peer-relationships, should be considered in future investigations, as they are common among child welfare-involved youth, and may co-exist with apparent external competence (Shpiegel et al., 2016; Yates & Grey, 2012).

Finally, causal inferences should not be made from current findings, given the possibility of many unexamined factors, as well the measurement challenges described above. These limitations are partially offset by using a large, national sample of foster youth, as well as a multidimensional approach to evaluating resilient functioning.

Directions for future research

Future studies should evaluate a broader array of protective factors in connection with long-term resilience, and should pay particular attention to Native American youth, to better understand their unique strengths and challenges during the period of transition to adulthood. As previously noted, future studies should also include additional indicators of resilient functioning, such as emotional wellbeing, and positive peer relationships.

Conclusion

The present study examined resilient outcomes among transition-age foster youth, and explored the risk, protective, and child welfare factors associated with sustained and periodic resilience. Overall, a fair number of youth in this study displayed resilient outcomes, both periodically and across time. The presence of periodic resilience reinforces the notion that it should be viewed as a dynamic *state*, rather than a consistent *trait* of the individual. The results demonstrate that several factors were associated with both sustained and

periodic manifestations of resilient outcomes during the period of transition to adulthood.

Notes

1. Fifteen states opted to use sampling for the FY2014 cohort: Colorado, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maryland, Massachusetts, Missouri, Ohio, Pennsylvania, Tennessee, Texas, and Washington.
2. These rates represent the percentages of youth who completed the follow-up surveys at ages 19 and 21, of those who were considered eligible to complete these surveys. In states that did not sample, any youth who completed the baseline survey was eligible for the follow-up surveys. In sampling states, only the youths included in the sample were eligible.
3. With the exception of mental health challenges, which was obtained from AFCARS.
4. With the exception of foster care status, which was obtained from NYTD.
5. As compared to sustained non-resilience, which served as a reference category in this analysis.
6. As compared to non-relative foster care placement.

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