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## The Prevalence and Correlates of Running Away among Adolescents in the US

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### Abstract

**Importance:** Runaway youth may experience a myriad of challenges associated with significant risks to health and well-being.

**Objective:** To examine the prevalence and correlates of running away from home among U.S. youth.

**Design:** Annual U.S. nationally representative samples of 8<sup>th</sup> and 10<sup>th</sup> graders between 2005 to 2017 from the Monitoring the Future study.

**Setting:** Self reports of nationally representative samples of 8<sup>th</sup> and 10<sup>th</sup> graders in the U.S.

**Participants:** Annual survey data from 8<sup>th</sup> and 10<sup>th</sup> graders spanning 2005–2017, n=116,520.

**Main outcome(s) and measure(s):** The primary outcome of this study, running away from home in the past 12 months, was examined using multivariable weighted logistic regression. Predictor measures included: parent and peer relationships, school factors (e.g., GPA), internalizing symptoms, externalizing behavior, and substance use (alcohol, marijuana, and cigarettes). Demographic measures in the model were grade level (8<sup>th</sup> or 10<sup>th</sup>), gender (boys or girls), parent education, and race/ethnicity.

**Results:** The annual prevalence of running away decreased significantly from 8.3% in 2005 to 6.1% in 2017. Demographically, running away from home was significantly lower among boys compared to girls. Multivariable logistic regression model results revealed that higher levels of parental involvement, GPA, and self-esteem are all significantly related to lower odds of running away from home. Having peers who drop out of school, going on more date nights, self-derogation, interpersonal aggression, sensation seeking, theft and property damage, as well as past 12-month alcohol use, past 12-month marijuana use, and past 30-day cigarette use were all associated with higher odds of running away from home.

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**Conclusions and relevance:** Annual prevalence of running away from home has been decreasing, but still affects a large number of teens. Running away is associated with numerous challenges across social, behavioral, and health domains that can further negatively impact the health and well-being of this already vulnerable population.

### Keywords

Runaway; Substance Use; Externalizing Behavior; Adolescence

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## Introduction

Adolescent runaways are a high-risk group, likely due as much to the behaviors and circumstances that lead to running away, as to the health and developmental sequelae of running away. Running away from home can be a consequential step toward life-long health risks and reduced opportunities. Yet, population-based research on the topic is sparse, in part because of the difficulties associated with reaching runaway youth. As a result, there remain gaps in the literature to understanding the prevalence and correlates of running away. In the present study we focus on identifying the prevalence and correlates of runaway youth in the U.S. to inform intervention efforts and service providers who interact with this population to further support the health and well-being of at-risk runaway youth. U.S. nationally representative data from 2005 through 2017 are used in the present study to track the self-reported prevalence of running away, and to examine the social, behavioral, and health correlates of this behavior.

Homeless youth include *runaways*, who have left home without parental permission for at least 24 hours, *throwaways*, who have been forced to leave home by their parents, *street youth*, who have spent at least some time living on the streets, and *systems youth*, young people who became homeless after aging out of foster care or exiting the juvenile justice system (Farrow, Deisher, Brown, Kulig, & Kipke, 1992; Haber & Toro, 2004; Toro, 2007). Typically, the age range for youth considered homeless has been 12–25 years.

## Risks and Challenges for Homeless and Runaway Youth

Homeless youth, including those running away, often experience a myriad of challenges, oftentimes concurrently, including poor mental health, poor parent relationships, substance use, and externalizing behaviors (Janus, Burgess, & McCormack, 1987; McCaskill, Toro, & Wolfe, 1998; Wan-Ning, Whitbeck, & Hoyt, 2000; Whitbeck, Hoyt, & Ackley, 1997; Yoder, Hoyt, & Whitbeck, 1998). Most often, youth are running away from problematic situations, making it important to not assign blame to or stigmatize them. Indeed, physical abuse, sexual abuse, and neglect by care givers are primary motives for running away (Tyler, Hoyt, Whitbeck, & Cauce, 2001; Whitbeck, Hoyt, & Bao, 2000). Research has linked family rejection, maltreatment, and low parental warmth to running away from home, and has demonstrated that youth who run away from home are more likely to run away again in the future (Tyler, Hagewen, & Melander, 2011). While runaway youth often choose to leave their families to escape toxic home environments, the challenges do not end when youth run away from their homes. Instead, research has shown the additional risks that runaway youth become vulnerable to while they live on the streets and in shelters (Whitbeck et al., 2000).

For example, runaway youth may become truant from school, may face diminished levels of adult social support, may develop relationships with deviant youth, and may become targeted victims of abuse from deviant adults on the streets (Tyler et al., 2001; Whitbeck et al., 2000).

The negative and oftentimes abusive home environments of runaway youth may reduce their trust in adults and increase their reluctance to seek help from others (Whitbeck, Hoyt, & Yoder, 1999). Positive social support, and in particular positive peer support, is important among runaway youth, and peers may provide survival strategies, emotional support, and resources. Research shows that adult and peer social support are associated with fewer depressive symptoms among homeless and runaway adolescents (Unger et al., 1998; Wanning et al., 2000).

The available literature on runaway and homeless youth has identified significant risk factors in this population; however, there are gaps that remain to be addressed. In particular, recent empirical research has been sparse, most studies have relied on convenience samples, and methods and measurement variation have made it difficult to establish a concrete count of runaway and homeless youth in the U.S. (Miech et al., 2020; Toro, Dworsky, & Fowler, 2007). An important exception is the Voices of Youth Count study, which provides estimates on homeless youth (Morton, Dworsky, & Samuels, 2017). The present study concerning national representative samples of U.S. 8<sup>th</sup> and 10<sup>th</sup> graders fills an important gap by examining historical trends in the prevalence of running away along with numerous important social, behavioral, and health correlates of running away among adolescents.

### **Current study**

The present study informs the literature on the associations between running away from home and psychosocial and behavioral predictors across multiple domains: parent and adult relationships, peer relationships, school factors, internalizing and externalizing behaviors, and substance use. This study has two aims, to examine 1) the prevalence of running away among 8<sup>th</sup> and 10<sup>th</sup> graders in the US from 2005 through 2017; and 2) the social, behavioral, and health correlates associated with running away.

## **Method**

### **Sample**

Data from US nationally representative samples from the Monitoring the Future (MTF) study of 13 consecutive cohorts of 8<sup>th</sup> and 10<sup>th</sup> graders, from years 2005 through 2017, were used for analysis (n=116,520) (Miech et al., 2020).

The MTF data collection process includes a 3-stage random sampling procedure, such that geographic location, schools, and classes within each school are randomly selected to participate. The MTF study provides sampling weights that were applied in the present analysis to correct for any selection bias due to the complex sample design. Participation response rates are approximately 90% for 8th graders and 86% for 10th graders; approximately 1% of students refusing to participate, and the remainder being absent on the day of data collection. The present study focuses on students who were

randomized to a survey form that has the runaway measure, including a random one-fourth of the 8th and 10th graders. Each of the survey forms is designed to yield US nationally representative estimates when the complex survey weights are applied. The MTF study is approved annually by the University of Michigan Institutional Review Board.

## Measures

Along with the outcome measure of running away, predictors including parent and adult relationships, peer relationships, school-related factors, internalizing behaviors, externalizing behaviors, and substance use (alcohol, marijuana, and cigarettes) were examined. Demographic characteristics (gender, grade level, parent education, and race/ethnicity) served as controls in the models. Some measures, described below, were re-coded into dichotomous measures due to skewed distributions.

### Outcome Measure

**Running away.**—Adolescents were asked, “In the past 12 months, how often have you run away from home (for more than 24 hours)?” with response options from none to five or more times. Due to the skewed distribution of this item, and to most efficiently address our research questions that concern the prevalence (rather than frequency) and correlates of running away, this item was recoded to a binary measure (1= “ran away from home” or 0= “Did not run away from home” in the past 12 months).

### Sociodemographic Measures

**Gender.**—Adolescents self-reported their gender, 0= “Girl” or 1= “Boy”.

**Grade.**—Adolescents self-reported their grade level, 8<sup>th</sup> or 10<sup>th</sup> grade.

**Race/ethnicity.**—Adolescent self-identified as the following race/ethnicity options: African American, Mexican American, Cuban American, Puerto Rican, Other Hispanic, Asian American, White, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander. This item was recoded to reflect 1= “Single race, non-Hispanic, white”, 2= “Hispanic”, 3= “Single race African American”, and 4= “Other race/ethnicity.” The category of “Other race/ethnicity” included all other racial groups, multiracial adolescents, and students who did not identify any racial/ethnic category.

**Parent education.**—The highest reported level of education of one or two parents/guardians was used to measure parent education. Responses were recoded as 0= “Low parent education—High school degree completion or less”, 1 = “High parent education—completed some college, college degree, or graduate degree.” Student reports indicating “Don’t know” were coded as missing.

### Parent and Adult Relationship Measures

**Parental involvement.**—this measure included four items on a 4-point response scale concerning how often parents (or stepparents or guardians) “checked on your homework,” “provided help with homework,” “required chores around the home,” and “limited TV time”. These were combined into a mean score of parental involvement with a Cronbach

alpha score of 0.63.<sup>a</sup> This parent involvement measure has been applied in previous MTF studies (Bryant, Schulenberg, O'Malley, Bachman, & Johnston, 2003).

**Adult social support.**—One item asked how often adolescents felt comfortable talking about a problem to an adult other than their parents. This three-category response item was recoded into a binary measure (0 = did not have an adult to talk to, and 1 = have an adult to talk to “some” or “all” of the time).

### Peer Relationship Measures

**Drop out friends.**—One item inquired about having friends who have dropped out of school. The four response options of this item were recoded into a binary item (0 = did not have friends who had dropped out of school and 1 = “some,” “a few,” or “all” of their friends dropped out of school).

**Time with peers.**—One item reported the number of evenings per week adolescents went out with friends without any adult supervision. The 6-point response scale ranged from 1= “less than 1 time” to 6= “6–7 times,” the higher score indicating more unsupervised time spent with peers.

**Date nights.**—A single item measured the number of times per week that adolescents go out on date nights. The 6-point response scale ranged from 1= “Never” to 6= “3+ times/week,” a higher score indicating more nights out on dates.

### School Measures

**GPA.**—Using one item, adolescents reported the average letter grade that best represented their grades during the past academic year. The response categories of this item ranged from 1= “D (69 or below)” to 9= “A (93–100),” with the higher score reflecting a higher-grade point average. GPA was recoded into a binary measure of passing grades (C- or above) and non-passing grades (D+ or below).

**School bonding.**—The mean score of three items was used to measure the extent to which adolescents felt bonded with their school (e.g., “Now thinking back over the past year in school, how often did you . . . enjoy being in school?”). Each of the three items was on a 5-point scale, ranging from 1= “Never” to 5= “Almost always.” The Cronbach alpha score for this measure was 0.75.

### Internalizing Behavior Measures

**Self-esteem.**—The mean score of four items based on Rosenberg (1965), each on a 5-point scale ranging from 1= “Disagree” to 5= “Agree,” was used to measure adolescent self-esteem (e.g., “I take a positive attitude towards myself”, “I feel I am a person of worth,

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<sup>a</sup>Because of state laws, California-based students were not given the parenting questionnaire items. This is essentially a planned-missingness design, with no reason to expect systematic variation in responses to these items between California and other state respondents, justifying the use of missing data (Little & Rhemtulla, 2013). Nonetheless, a sensitivity analysis was conducted in which this parenting measure was excluded in the full model; there were no differences in the significant findings between the two models with and without this parenting measure.

on an equal plane with others”). A higher score indicates higher levels of self-esteem. The Cronbach alpha score for this measure was 0.83.

**Self-derogation.**—The mean score of four items, each on a 5-point scale, ranging from 1= “Agree” to 5= “Disagree” were used to measure the self-reported score of adolescent self-derogation. The items were reverse coded such that a higher score would reflect a higher level of self-derogation. A sample item of this measure is, “I feel that I have nothing to be proud of”. The Cronbach alpha score of this measure was 0.86.

### Externalizing Behavior Measures

**Interpersonal aggression.**—Three items were used to create a mean score of interpersonal aggression (Veliz, McCabe, Eckner, & Schulenberg, 2021). Each item asked adolescents to reflect on the past 12-months and report how often they engaged in aggressive behaviors (e.g., “During the last 12 months, how often have you. . . Gotten into a serious fight in school or at work”). Response options were 1= “Not at All,” 2= “Once,” 3= “Twice,” 4= “3 or 4 Times,” and 5= “5 or More Times,” with higher mean scores indicating higher levels of aggressive behavior. The Cronbach’s alpha score for this measure was 0.80.

**Theft and property damage.**—Three items concerning trespassing, vandalism, and theft in the past 12 months (e.g., “how often have you. . . gone into some house or building when you weren’t supposed to be there?”) were used to measure theft and property damage behavior. The three 5-point scale items (1= “Not at all” to 5= “5 or more times”) were used to create a mean score, where a higher score reflects higher levels of theft and property damage behavior (Veliz et al., 2021). The Cronbach alpha score for this measure was 0.77.

### Sensation Seeking

Two items on a 5-point scale (1= “Disagree” to 5= “Agree”) (i.e., “I get a real kick out of doing things that are a little dangerous,” “I like to test myself every now and then by doing something a little risky”) were used to measure sensation seeking. Higher mean scores indicate higher levels of sensation seeking behavior. The Cronbach alpha score for this measure was 0.77.

### Substance Use Measures

Adolescents were asked to report on the number of occasions they used alcohol, marijuana, and cigarettes. Each of the substance use items had ordinal response options; however, due to low variability and skewness, they were each recoded into a binary item reporting prevalence, 0= “No use” and 1= “Use.”

**Past 12-month alcohol use.**—Any past 12-month alcohol was coded as 0= “No use” and 1= “Use.”

**Binge drinking.**—The ordinal response categories for consuming 5 or more alcoholic beverages in one sitting at least once during a span of 2 weeks were collapsed to 0= “No binge drinking” and 1= “Binge Drinking.”

**Past 12-month marijuana use.**—Marijuana use was coded as no marijuana use in the past 12 months (=0) and one or more reported occasions of marijuana use (=1).

**Past 30-day Cigarette use.**—The ordinal response categories for past 30-day cigarette use were coded as 0= “No cigarette use” and 1= “Cigarette use.”

## Analyses

Weighted sample analyses were conducted to examine the prevalence of running away across 2005 through 2017 by grade level (8<sup>th</sup> and 10<sup>th</sup>), gender (boys and girls), and race/ethnicity (White, Hispanic, Black, and other). A series of bivariate models were conducted to examine differences in correlates among runaway and non-runaway youth. To further examine the extent of runaway youths’ engagement in risk factors, we examined count percentages of reporting at least one, two, three and four out of seven behavioral risk factors. Lastly, two logistic regression models, including sample weights, were conducted to examine demographic characteristics and correlates of running away from home among 8<sup>th</sup> and 10<sup>th</sup> grade students (model a: bivariate; model b: multivariable). All analyses were completed using Stata15 (StataCorp, 2017). Missing data were addressed using multiple imputation. The multiple imputation consisted of 100 iterations and a set starting value to ensure replication. All missing data were imputed except for student gender. Missing data ranged from 0.54% for school bonding to 25.54% for parent involvement. Missing data for parent involvement was higher due to this measure being excluded for California students; see footnote a.

## Results

### Prevalence of Running Away

Based on weighted annual prevalence of the sample, running away from home for 8<sup>th</sup> and 10<sup>th</sup> graders combined and averaged over 2005 through 2017 was 7.22%. Prevalence was similar for 8<sup>th</sup> (7.32%) and 10<sup>th</sup> graders (7.12%); it was 7.94% for girls and 6.31% for boys. Prevalence for the sample decreased from 8.37% in 2005 to 6.13% in 2017; it decreased between 2005 to 2017 from 9.43% to 6.94% for girls and from 6.97% to 4.75% for boys. Based on analysis of trends, the overall decline in running away across 2005 through 2017 was significant,  $p < 0.001$ .

### Correlates of Running Away

To address the second research question regarding the correlates of running away, we first carried out bivariate associations (logistic regression for Model a) and calculated count percentages. Second, we examined multivariable logistic regressions (Model b), a full model inclusive of sociodemographic and all predictor measures of interest.

### Bivariate Associations

Of students who ran away, 57.05% were girls, compared to 50.93% girls among non-runaways. Table 1 reports all descriptive statistics of the sample. Regarding the demographic and psychosocial correlates, bivariate analyses comparing runaways to non-runaways showed that runaways were significantly different on all correlates except grade level (see

Table 2 Model a). Runaway youth, compared to non-runaway youth, were significantly more likely to be girls, to have parents with lower education, and to be Hispanic and of an 'other' racial/ethnic group. Compared to non-runaway youth, runaway youth reported significantly lower levels of parental involvement, adult social support, school bonding, and self-esteem; and they reported significantly higher levels of non-passing grades, having peers who dropped out of school, spending time with peers, going out on date nights, self-derogation, interpersonal aggression, theft/property damage, sensation seeking, alcohol use, binge drinking, marijuana use, and cigarette use.

We also examined the seven behavioral risk factors of running away (i.e., any interpersonal aggression, any theft and property damage, having a peer who has dropped out of school, low GPA (i.e., below C average), and binge drinking, marijuana, and cigarette use) as a count variable. Results show that 95.45% of the runaways and 57.37% of non-runaways reported at least one of the seven risk factors; 84.38% and 31.69% reported at least two risk behaviors, 65.56% and 15.01% reported at least three of the risk behaviors, and 39.89% and 3.63% reported over half of the seven risk behaviors, respectively. That is, four out of 10 runaways had 4 or more risk factors, whereas only about one in 27 non-runaways had 4 or more risk factors.

### Multivariable Model Results

In Table 2 Model b, we present the results of the full model, examining each of the correlates of interest while accounting for sociodemographic measures. The results of Model b are detailed below.

**Sociodemographic measures.**—Regarding sociodemographic characteristics, gender remains significant such that boys had lower odds of running away than girls (AOR= 0.56, CI 0.52–0.60), grade level was non-significant, and parent education was not significant. The odds of running away were significantly higher for Hispanic (AOR= 1.11, CI 1.02–1.21), Black (AOR= 1.13, CI 1.02–1.26) and other race/ethnicity (AOR= 1.22, CI 1.12–1.32) adolescents than whites.

**Parent and adult relationship measures.**—Higher levels of parental involvement were associated with lower odds of running away (AOR= 0.87, CI 0.82– 0.92,  $p < .001$ ). There was no significant relationship between non-parental adult social support and running away.

**Peer relationship measures.**—Having friends who dropped out of school, relative to not having friends who dropped out, was significantly associated with running away (AOR= 1.62, CI 1.51–1.74,  $p < .001$ ). Higher levels of unsupervised time with peers was also significantly associated with running away (AOR = 1.03, CI 1.01– 1.05,  $p < .05$ ), as was reporting a higher number of dates per week (AOR = 1.13, CI 1.08– 1.16,  $p < .001$ ).

**School measures.**—Of the two school-related factors examined, only academic achievement (GPA) but not school bonding, was significantly associated with running away. Reporting non-passing grades (D+ or below) was associated with higher odds of running away (AOR= 1.33, CI 1.16– 1.53,  $p < .001$ ).



**Internalizing and externalizing measures.**—Both internalizing and externalizing behaviors were significantly related to running away. Higher levels of self-esteem were related to significantly lower odds of running away (AOR= 0.78, CI 0.75–0.81,  $p<.001$ ). Higher levels of self-derogation were associated with significantly higher odds of running away (AOR= 1.36, CI 1.31–1.39,  $p<.001$ ). Higher levels of aggressive behavior and of theft and property damage were associated with significantly higher odds of running away, as was true for higher levels of sensation seeking (AOR=2.01, CI 1.94– 2.09,  $p<.001$ ; AOR= 1.51, CI 1.45– 1.57,  $p<.001$ ; and AOR= 1.12, CI 1.08– 1.15,  $p<.001$ , respectively).

**Substance use measures.**—Significant relationships were found between substance use and running away. Prevalence of past 12-month alcohol use, binge drinking, past 12-month marijuana use, and past 30-day cigarette use were each related to significantly higher odds of running away (AOR= 1.25, CI 1.16–1.36,  $p<.001$ ; AOR=1.13, CI 1.03–1.25,  $p=.01$ ; AOR= 1.36, CI 1.25–1.48,  $p<.001$ ; AOR= 1.36, CI 1.24– 1.49,  $p<.001$ , respectively).

Lastly, we conducted a sensitivity analysis to determine the extent to which sociodemographic predictors varied when social, psychological, and behavioral factors were included. Comparing the full model (Model 2 b) to the demographics only multivariable model, the results were the same, except for parent education being significant only in the sociodemographic model.

## Discussion

This nationally representative study shows that the prevalence of running away among US 8<sup>th</sup> and 10<sup>th</sup> graders over a 13-year period was 7.2%. That is, across the period between 2005 and 2017, one out of 14 teens in the US between ages 13 and 16 report running away from home for 24 hours or more at least once in the past year. This trend declined between 2005 and 2017, from 8.3% to 6.1%. This decline is a welcome finding and is consistent with a downward trend in homelessness, in general, in the US (“National Alliance to End Homelessness”). Running away was lower for boys than girls and has declined for both over the years. The odds of running away were significantly higher among youth who identified as Hispanic, Black, or of an other race/ethnicity, compared to white youth. However, we found no significant difference by grade level, that is, both 8<sup>th</sup> and 10<sup>th</sup> graders are running away at similar rates. Compared to teens who did not runaway, those who did reported significantly more potential challenges with parent and adult relationships, peer relationships, school-related factors, internalizing and externalizing behaviors, and substance use.

The multiple challenges faced by runaway adolescents may pose significant long-term consequences for their health and well-being and may put them at risk for significant challenges in adulthood. Failure to receive a high school degree and engaging in risk behaviors such as solicitation and theft, for example, may steer young adults into a path of chronic economic instability and homelessness (Ferguson et al., 2011). Research suggests that runaway youth who are economically unstable, unemployed, and lack financial resources, have higher probabilities of engaging in survival strategies that are risky and sometimes illegal. Participating in these survival strategies opens the door for a multitude

of additional consequences that may further disadvantage the runaway youth (Tompsett, Domoff, & Toro, 2013).

The current study found significant correlates of running away that are consistent with studies on homeless youth. Similar to the gender differences found in the present study, a longitudinal study on homeless youth aged 13–17 reported higher homelessness rates among girls than boys (Cauce et al., 2000). Additionally, we found that Hispanic, Black, and ‘other’ race youth were significantly more likely to run away from home than white youth. The disproportionate effect of running away, as well as homelessness, across race/ethnicity has been documented by previous research that parallel our findings (Benoit-Bryan, 2011; Morton et al., 2018). Future research on runaway youth that is inclusive of racial/ethnic minorities and their unique experiences due to persistent structural and social inequalities is necessary to gain a more comprehensive understanding of the motives contributing to running away and to ensure the distribution of racially and culturally efficacious efforts for this vulnerable population. Furthermore, school level factors such as lower school grades and more misbehavior have been shown to be prevalent among homeless youth (Greene, Ennett, & Ringwalt, 1997). Other research has also found consistently higher levels of substance use, particularly alcohol use, among homeless youth (Maccio & Schuler, 2012; McCaskill et al., 1998; Salomonsen-Sautel et al., 2008; Thompson, Zittel-Palamara, & Forehand, 2005).

The present study adds to existing literature by specifically focusing on runaway youth with US annual national samples across 14 years. The analyses simultaneously accounted for a multitude of factors across domains, demonstrating the complex contextual and behavioral relationships associated with running away from home. For runaway youth, we found that behavioral challenges were endemic: four out of 10 runaways reported four or more behavioral risk factors, whereas less than one in 27 non-runaways did so. We want to highlight the unique circumstances (i.e., home, school, social, etc.) that may contribute to running away, with the decision to run away being a last resort survival action for many youth. This study highlights the multiple challenges across social, behavioral, and health factors that runaway youth may experience.

### **Strengths and Limitations**

A major challenge in addressing youth homelessness and running away is acquiring an accurate estimate of this population, and the characteristics and contexts that render risk for homelessness. In this regard, the MTF data used in this study provided a distinct advantage and allowed for nationally representative estimates of the prevalence and correlates of running away. This study’s data capture 8<sup>th</sup> and 10<sup>th</sup> grader reports of multiple predictors, including parent and adult relationships, peer relationships, school-related factors, internalizing and externalizing behaviors, and substance use. These measures yield a broad assessment of correlates across domains and their relationships with running away from home. However, there are also limitations worth noting. First, the data capture only those 8<sup>th</sup> and 10<sup>th</sup> graders who were enrolled in school and were present in school on the particular day of survey administration. Therefore, this study does not capture students who have already dropped out, home-schooled youth, or students who may have

run away at the time of the survey. As a result, the estimates captured in this study may be conservative. Second, the data are cross-sectional and cannot be used to determine causality among running away and the correlates. The study's focus on runaways offers both the advantage of learning specifically about the runaway population and the disadvantage of not addressing all types of youth homelessness (sometimes categorized as "throwaways", "street youth," or "systems youth") (Wan-Ning et al., 2000). Similarly, a common form of youth homelessness, known as 'couch surfing,' may as indicated by the Voices of Youth Count study, not be recognized by youth as running away or being homeless. Additionally, our study only captures a binary measure of gender. Lastly, all measures are adolescent self-reports that may contain participant self-report bias. The results of this study need to be considered in light of these limitations.

### Implications and Future Directions

The present study provides a large scale, national perspective on the prevalence and correlates of running away that span 2005 through 2017. The data and results inform us of the multiple challenges that runaway youth in the U.S. experience and raise two significant research questions that our study is unable to address. The first is to study the motives youth have for running away and returning home. The second is to examine the long-term effects of running away from home during adolescence on functioning and adjustment in adulthood.

The many challenges across ecological domains identified in this study among 8<sup>th</sup> and 10<sup>th</sup> grade runaways provide some insight for prevention efforts, practitioners, and school staff dealing with runaway youth. Count percentages show that runaway youth are engaging in multiple risk behaviors at a greater extent than non-runaways. For professionals, youth who indicate running away are likely involved in multiple risk behaviors such as substance use, interpersonal aggression, theft, and property damage, as well as low academic performance. In this context, a question regarding running away, past or contemplated, can serve a screening function for health-compromising risk behaviors. Likewise, youth who present with multiple risk behaviors may also have experienced running away, which can exacerbate health-compromising risk behaviors. While our findings indicate that running away from home has significantly decreased in prevalence among the nation's 13- to 16-year-old students, still, as of 2017, 6.1% have runaway at least once in the past year. Given the dangers and multiple risk factors associated with running away, the finding that one-in-sixteen 13-to-16-year-olds ran away from home at least once in 2017 highlights threats to the health and well-being of a large proportion of young people.

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**Table 1**

## Descriptive Statistics

Measure	Runaways (n=8,626)	Non-Runaways (n=110,865)
	% -or- (mean/se)	% -or- (mean/se)
Gender		
Girls	57.05%	50.93%
Boys	42.95%	49.07%
Grade Level		
8	50.01%	49.29%
10	49.99%	50.71%
Race (ref: White)		
Black	11.77%	11.28%
Hispanic	19.49%	15.10%
White	47.72%	56.47%
Other	21.03%	17.15%
Parent Education		
Low	33.95%	22.86%
High	66.05%	77.14%
Parental Involvement	2.33 (0.01)	2.72 (0.01)
Adult Social Support	68.21%	75.45%
Drop Out Peers	57.35%	24.29%
Time with Peers	3.38 (0.02)	2.82 (0.01)
Date Nights	2.8 (0.02)	2.02 (0.01)
GPA (Failed)	9.41%	2.29%
School Bonding	2.60 (0.01)	3.02 (.01)
Self Derogation	2.99 (0.02)	2.09 (0.01)
Self Esteem	3.45 (0.02)	4.05 (0.01)
Interpersonal Aggression	2.19 (0.02)	1.22 (0.00)
Theft/ Property Damage	2.07 (0.01)	1.25 (0.00)
Sensation Seeking	3.70 (0.02)	3.07 (0.01)
Past 12-Month Alcohol Use	68.57%	35.79%
Binge Drinking	31.66%	9.10%
Past 12-Month Marijuana Use	48.26%	16.85%
Past 30-Day Cigarette Use	28.06%	6.27%

**Table 2**

**Logistic Regression Model Results (n=116,520)**

Measure	Model a: Bivariate n=116,520				Model b: Full Model (n=116,520)			
	OR (Std. Err)	t	95% Confidence Interval	p-value	AOR (Std. Err)	t	95% Confidence Interval	p-value
Gender (ref: Girls)								
Boys	0.760 (0.021)	-10.11	0.721 0.801	<0.001	0.557 (0.019)	-17.21	0.521 0.596	<0.001
Grade Level (ref: 8)								
10	0.986 (0.032)	-0.41	0.925 1.052	0.684	0.811 (0.028)	-6.11	0.759 0.868	0.52
Race (ref: White)								
Hispanic	1.346 (0.048)	8.35	1.255 1.443	<0.001	1.107 (0.048)	2.37	1.018 1.205	0.018
Black	1.092 (0.050)	1.91	0.997 1.196	0.057	1.132 (0.063)	2.24	1.016 1.262	0.025
Other	1.290 (0.047)	6.91	1.200 1.386	<0.001	1.216 (0.051)	4.62	1.119 1.321	<0.001
Parent Education (ref: Low)								
High	0.589 (0.19)	-16.35	0.553 0.627	<0.001	0.975 (0.038)	-0.64	0.903 1.053	0.52
Year	0.958 (0.004)	-10.08	0.950 0.966	<0.001	0.985 (0.004)	-3.35	0.976 0.993	0.001
Parental Involvement	0.509 (0.011)	-31.12	0.488 0.531	<0.001	0.873 (0.023)	-5.09	0.828 0.920	<0.001
Adult Social Support	0.678 (0.0220)	-12.23	0.637 0.722	<0.001	1.016 (0.039)	0.41	0.942 1.096	0.678
Drop Out Peers	4.270 (0.123)	50.22	4.034 4.519	<0.001	1.623 (0.057)	13.61	1.514 1.740	<0.001
Time with Peers	1.240 (0.11)	25.01	1.219 1.260	<0.001	1.032 (0.011)	2.93	1.010 1.054	0.03
Date Nights	1.397 (0.0116)	40.14	1.374 1.419	<0.001	1.133 (0.013)	10.97	1.108 1.159	<0.001
GPA	4.493 (0.238)	28.31	4.049 4.986	<0.001	1.332 (0.096)	3.98	1.156 1.534	<0.001
School Bonding	0.582 (0.010)	-32.21	0.563 0.601	<0.001	0.988 (0.020)	-0.61	0.950 1.027	0.543
Self Derogation	1.842 (0.020)	55.74	1.802 1.882	<0.001	1.355 (0.022)	19.02	1.314 1.398	<0.001
Self Esteem	0.606 (0.007)	-42.3	0.593 0.621	<0.001	0.782 (0.014)	-13.36	0.754 0.811	<0.001
Interpersonal Aggression	3.230 (0.051)	74.16	3.131 3.332	<0.001	2.014 (0.040)	35.7	1.938 2.093	<0.001
Theft/ Property Damage	3.063 (0.045)	75.56	2.975 3.153	<0.001	1.512 (0.030)	20.8	1.454 1.572	<0.001
Sensation Seeking	1.506 (0.019)	32.33	1.469 1.544	<0.001	1.116 (0.017)	7.22	1.08 1.150	<0.001
Past 12-Month Alcohol Use	3.861 (0.116)	44.79	3.639 4.096	<0.001	1.255 (0.052)	5.53	1.158 1.360	<0.001
Binge Drinking	4.802 (0.159)	47.52	4.501 5.124	<0.001	1.134 (0.056)	2.55	1.029 1.248	0.011
Past 12-Month Marijuana Use	4.640 (0.129)	55.17	4.394 4.900	<0.001	1.360 (0.057)	7.32	1.252 1.476	<0.001
Past 30-Day Cigarette Use	5.745 (0.191)	52.44	5.381 6.133	<0.001	1.355 (0.063)	6.48	1.236 1.486	<0.001

Note: AOR= Adjusted Odds Ratio; Std. Error= Standard Error