

## RESEARCH ARTICLE

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# Single Parent Family Structure as a Predictor of Alcohol Use among Secondary School Students: Evidence from Jamaica

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### Abstract

**Background:** In Jamaica, alcohol is the most commonly used substance among adolescents and young persons. The aim of this study was to examine the potential relationship between Jamaican secondary students' alcohol drinking habits and their family structure. **Methods:** Data collected from a nationally representative survey of 3,365 students were analysed. Descriptive and inferential statistics were performed. **Results:** Out of the 3,365 students, 1,044 (31.0%) were from single-parent families. Single-parent families, married-parent families and common law-parent families were significantly associated with lifetime use of alcohol (AOR= 1.72, 95% CI= 1.06 - 2.79; AOR= 1.73, 95% CI= 1.07- 2.81, AOR= 1.94, 95%CI= 1.17- 3.21 respectively). However, family structure was not significantly associated with past year and past month alcohol use. Students whose parents "sometimes" knew their whereabouts were significantly less likely to use alcohol in their lifetime compared to students whose parents "Always" knew where the students were. **Conclusion:** Family structure is an independent predictor of alcohol use among high school students in Jamaica. Being from single-parent families, married-parent and common- law parent families were significantly associated with increased likelihood for lifetime alcohol use.

**Keywords:** Single parent- family structure- alcohol consumption- students- Jamaica

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### Introduction

The current rise in single parent families has been explained among other factors by a change in social-cultural trends, rising divorce rates, unplanned pregnancies, choice single parenting, higher education attainment and paid employment by women (Gordon and McLanahan, 1991; Organization for Economic Cooperation and Development [OECD], 2011). Findings suggest that one out of three (1/3) children born between mid-1960's and late 1990's were born to unmarried single mothers (Ventura and Bachrach, 2000; Waller and Peters, 2008). By the year 2011, 15% of the world's children were living in single-parent families (OECD, 2011). Consequently, there has been a rise in the number of children living and growing up under the care of single parents (Martin et al., 2017). In the United States of America (USA) alone, by 2002, this number had reached 28% (OECD, 2011; Martin et al., 2017). Substantially,

single parent families have been headed by women not only in the USA but elsewhere as well.

In the Caribbean, female-headed single parent families constitute about 45% of the families (Hill, 2011; United Nations, 2011). Evidence suggests that absence of father-figures to children in single parent families is associated with emotional disconnection and weak social connectivity in such children (United Nations, 2011). It has also been argued that single parent families find it more challenging to provide the required parental support necessary for shaping the future of the adolescents (Hill, 2011). Single parents also seem to spend less time with their growing children or get fully involved in the lives of their children including educational pursuits (American Psychological Association [APA], 2017).

Moreover, children who grow up in single parent families have been reported to be more likely to consume alcohol compared to their peers from two-parent families (Amato and Patterson, 2017; Weitoft et al., 2003;

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Santrock, 2008). Researchers further postulated that young people who use alcohol at a young age are more likely to have increased risk of alcohol use and abuse later in life (Grant and Dawson, 1997). Indeed, alcohol use among adolescents and young people is a serious mental/public health problem world-wide (Koob and Le Moal, 2005; WHO, 2014). In Jamaica, studies have shown that alcohol consumption is quite prevalent among Jamaican secondary school students (Fox et al., 2009). Alcohol is listed as the most commonly used and abused substance among Jamaican adolescents (Fox et al., 2009; Atkinson et al., 2015). Findings show that alcohol had the highest prevalence - lifetime, past year and past month – among secondary school students compared to cigarettes, cannabis and inhalants (Atkinson et al., 2015). The mean age of debut was also lower for alcohol compared to the other drugs as follows: alcohol (12.6 years), cigarettes (12.7 years) and marijuana (13.3 years) respectively (Atkinson et al., 2015).

A plethora of studies have examined the risk factors for and protective factors against alcohol consumption among adolescents and youth, including high school students (Sancho et al., 2011; Mohanan et al., 2014; Osei-Bonsu et al., 2017). The risk factors for alcohol consumption have been documented to include gender, grade at school, relationship with parents, religion, tobacco use, family structure (Ledoux et al., 2002; Sancho et al., 2011; Pengpid and Peltzer, 2012; Mohanan et al., 2014; Osei-Bonsu et al., 2017). Most of these studies were done outside the Caribbean region and Jamaica in particular. In Jamaica, there is, acute dearth of studies that investigate the association between single-parent family structure, which is the current dominant family structure, and alcohol consumption among adolescents and youth in secondary schools. This study therefore sought to assess if any association exists between single parent family structure and alcohol consumption among high school students.

## Materials and Methods

This was a descriptive, cross-sectional study based on data from a nationally representative sample data. The data were collected using the National School Survey (NSS) 2013 questionnaire, which was an Inter-American tool for collection of data on substance use in secondary schools in the region. Data were collected from 3,365 high school students in grades eight, 10, 11 and 12 in 38 schools Island-wide. The survey covered the four counties and all the parishes in the nation. Students were randomly sampled from both public and private secondary schools. Details of the survey design are described elsewhere (Atkinson et al., 2015). Parental marital status was used as a proxy for family structure in this study.

### Data Analysis

Descriptive analyses were done for social and demographic characteristics of participants. In bivariate analysis, differences in proportions of participants with different characteristics were computed and significance tested with Chi square. Significance level was set at  $p < 0.05$ . Multivariate analysis was done using binary

logistic regression. Adjusted odds ratio (AOR) and 95% confidence intervals (95% CI) were computed to assess if independent variables were risk or protective factors regarding three key dependent variables: “lifetime use of alcohol”, “alcohol use over past year” and “alcohol use over past month”. All statistical analyses were done using PSPP (GNU Project).

### Ethical considerations

The National Secondary School survey received approval from the Jamaican Ministry of Health as well as the Ethics Committee of the Faculty of Medical Sciences of The University of the West Indies, Mona Campus. Further details about the ethical procedures can be found in Atkinson et al., (2015).

## Results

The mean age of respondents was 14.97 (SD: 1.71) years. The total number of respondents was 3,365. Of this total, 3,295 (97.9%) were from public schools. By gender, 1915 (56.90%) of the respondents were females. Majority of the students were in the 10th and 11th grades. Out of the total of 3,365 students, 1,044 (31.0%) indicated that they were from single parent households. This was followed by students from married parents with 928 (27.6%), and separated parents 576 (17.1%) (Table 1).

Table 2 shows the prevalence of alcohol consumption among secondary school students by family structure.

Table 1. Sociodemographic and Family Structure Characteristics of Secondary School Students in Jamaica, 2013

Characteristics	N	%
Age, years (mean [SD])	14.97 [1.71]	
Gender		
Male	1426	42.4
Female	1915	56.9
Type of school		
Public	3295	97.9
Private	70	2.1
Grade at School		
8 <sup>th</sup>	1037	30.8
10 <sup>th</sup>	1109	33.0
11 <sup>th</sup>	888	26.4
12 <sup>th</sup>	331	9.8
Parental marital status		
Single	1044	31.0
Married	928	27.6
Divorced	101	3.0
Separated	576	17.1
Widowed	48	1.4
Common-law	477	14.2
Other	122	3.6

n, number, %, Percentage, SD, Standard Deviation, NSS, National Secondary Schools Survey. Note: Missing data Percentages may not add up to 100 due to rounding error.

Table 3. Factors Associated with Life Time Use of Alcohol among Secondary School Students in Jamaica, 2013

Variable	Adjusted OR	95% CI
Gender		
Male	1.16	0.98-1.38
Female	1	
Marital Status		
Other	1	
Single	1.72	1.06-2.79
Married	1.73	1.07-2.81
Divorced	1.33	0.68-2.59
Separated	1.56	0.95-2.57
Widow	1.23	0.52-2.92
Common-law	1.94	1.17-3.21
Parent pays attention to school		
Not at all	1	
very close	2.58	1.60-4.17
Closely	1.54	0.95-2.51
Somewhat	0.84	0.50-1.43
Parent knows where student is		
Always	1	
Never	0.58	0.31-1.08
Sometime	0.71	0.57-0.88
Parent controls time		
Never	1	
Yes	0.81	0.41-1.61
No	0.55	0.27-1.14
Rarely	0.4	0.19-0.83

OR, Odds ratio; 95% CI, 95% Confidence Interval

structures (single, married and common law) were positively and significantly associated with lifetime use of alcohol (AOR= 1.72, 95% CI= 1.06- 2.79; AOR= 1.73, 95% CI= 1.07- 2.81; AOR= 1.94, 95% CI= 1.17-3.21 respectively). After controlling for the covariates, students who reported that parents “somewhat” paid attention to their school work were less likely to use alcohol in their lifetime (AOR= 0.84, 95% CI= 0.50 – 1.43). This result was however not statistically significant.

Students whose parents “sometimes” knew their whereabouts were significantly less likely to use alcohol in their lifetime compared to students whose parents “Always” knew where the students were (AOR= 0.71, 95% CI= 0.57-0.88). Students who reported “Yes”, “No” and “Rarely” to whether parents control time student comes home at night were all less likely to use alcohol in their lifetime, compared to students whose parents “never” control the time student comes home at night (AOR= 0.81, 95% CI= .41- 1.61; AOR= 0.55, 95% CI= 0.27- 1.14; AOR= 0.40, 95% CI= 0.19-0.83 respectively). However, the association was significant only for those students who reported that their parents “Rarely” control time student comes in at night (Table 3).

Table 4 portrays the results of logistic regression of factors associated with alcohol consumption over the

Table 2. Prevalence of Alcohol Use among Secondary School Students by Family Structure in Jamaica, 2013

Variable	Single n(%)	Married n(%)	Divorced n(%)	Separated n(%)	Widow n(%)	Common-law n(%)	Other n(%)	X <sup>2</sup> (P-value)
Total	1044	928	101	576	48	477	122	
Lifetime	658 (63.0)	577 (62.1)	66 (65.3)	376 (65.2)	35 (72.9)	283 (59.3)	94 (77.0)	13.27 (0.03)
Past Year	453 (43.3)	385 (41.4)	43 (42.5)	266 (46.1)	24 (50)	193 (40.4)	61 (50)	4.68 (0.58)
Past month	260 (24.9)	200 (21.5)	19 (18.8)	151 (26.1)	14 (29.1)	100 (20.9)	38 (31.1)	5.55 (0.47)
Frequency of alcohol use:								
Daily	8 (0.76)	10 (1.07)	1 (0.09)	4 (0.6)	2 (4.1)	3 (0.62)	2 (1.6)	23.11 (0.51)
Several days	16 (1.53)	14 (1.50)	0	2 (0.34)	0	5 (1.04)	1 (0.81)	
Weekend	45 (4.31)	28 (3.01)	3 (2.9)	17 (2.9)	2 (4.1)	20 (4.19)	6 (4.9)	
Few times a month	114 (10.9)	109 (11.7)	8 (7.9)	69 (11.9)	3 (6.25)	47 (9.8)	17 (13.9)	
Never	193 (18.4)	167 (17.9)	24 (23.7)	48 (8.3)	12 (25)	80 (16.7)	32 (26.2)	

n, number; %, Percentage; X<sup>2</sup>, Chi square; Note: Missing data Percentages may not add up to 100 due to rounding error.

As seen from this table, respondents in “other” family types recorded the highest prevalence of lifetime use of alcohol (77%), followed by students from widowed parents (72.9%), divorced parents (65.3%), separated parents (65.2%), single parents (63.0%), married parents (62.1%) and parents in common-law (59.3%). There was a statistically significant difference in lifetime use of alcohol among the students from the various types of family structure (X<sup>2</sup> = 13.27, p = 0.03). On the other hand, there was no significant difference among students from the different family structures in past year’ and past month’ use of alcohol. Similar trend was observed for frequency of alcohol use.

Displayed on Table 3 are the results of logistic regression of factors associated with lifetime use of alcohol among secondary school students. There were no significant differences between males and females in lifetime use of alcohol (AOR= 1.16, 95% CI= 0.98 – 1.38). On the other hand, three of the family

Table 4. Factors Associated with Past Year Alcohol Use among Secondary School Students in Jamaica, 2013

Variable	Adjusted OR	95% CI
Gender		
Female	1	
Male	1.02	0.83-1.25
Marital Status		
Other	1	
Single	1.09	0.66-1.80
Married	1.14	0.69-1.90
Divorced	1.08	0.52-2.24
Separated	0.85	0.50-1.14
Widow	1.21	0.50-2.89
Common-law	1.09	0.64-1.88
Parent pays attention to school		
Not at all	1	
very close	1.17	0.73-1.88
Closely	0.96	0.59-1.54
Somewhat	0.81	0.49-1.34
Parent knows where student is		
Always	1	
Never	0.89	0.49-1.61
Sometimes	0.75	0.59-0.97
Parent controls time		
Never	1	
Yes	1.74	0.68-4.45
No	1.11	0.42-2.94
Rarely	0.97	0.37-2.25

OR, Odds ratio; 95% CI, 95% Confidence Interval

past year. Gender was not significantly associated with alcohol consumption in the past year (AOR= 1.02, 95 % CI= 0.83 – 1.25). All types of family structure including single parent were not significantly associated with alcohol consumption in the past year.

Parents paying “very close”, “close” and “somewhat” attention to the students’ school work was not significantly associated with alcohol consumption in past year. Students whose parents “sometimes” knew where the students were had 0.75 times the odds of consuming alcohol in past year (AOR= 0.75, 95% CI= 0.59- 0.97).

As shown in Table 5, gender was not significantly associated with alcohol use in the past month (AOR= 0.88, 95% CI= 0.70 – 1.09). Similarly, none of the different family structures was significantly associated with alcohol use in the past month. The association was inversely significant for those students who reported that their parents “sometimes” knew their whereabouts (AOR= 0.70, 95% CI= 0.54- 0.90).

## Discussion

The prevalence of alcohol consumption among secondary school students was found to be high in this study. This result agrees with other studies which found

Table 5. Factors Associated with Past Month Use of Alcohol among Secondary School Students in Jamaica, 2013

Variable	Adjusted OR	95% CI
Gender		
Female	1	
Male	0.88	0.70-1.09
Marital status		
Other	1	
Single	1.06	0.63-1.81
Married	1.16	0.68-1.98
Divorced	1.75	0.79-3.85
Separated	0.96	0.55-1.67
Widow	0.68	0.25-1.88
Common-law	1.24	0.70-2.19
Parent pays attention to school		
Not at all	1	
very close	1.86	1.11-3.09
Closely	1.86	1.12-3.08
Somewhat	1.45	0.85-2.25
Parent knows where student is		
Always	1	
Never	0.63	0.34-1.19
Sometimes	0.7	0.54-0.90
Parent controls time		
Never	1	
Yes	1.02	0.43-2.43
No	1.02	0.41-2.53
Rarely	0.78	0.32-1.90

OR, Odds ratio; 95% CI, 95% Confidence Interval

that alcohol use was high among young people (Fox et al., 2009; Ledoux et al., 2002). This study found that gender was not significantly associated with alcohol use (lifetime use, past year and past month). Three forms of family structure (single, married and common law) were positively and significantly associated with lifetime use of alcohol indicating that students from these forms of family structure were more likely to use alcohol in their lifetime compared to students from other family structures. These three forms were therefore found to be risk factors for lifetime use of alcohol among secondary school students. This study differs from other studies which found that married-parents’ family structure was not a risk factor for lifetime use of alcohol (Mohanani et al., 2014; Ledoux et al., 2002).

Analysis of the covariates indicated that parents’ “sometimes” knowing whereabouts of the students was a protective factor for lifetime use of alcohol as well as alcohol use in past year and past month, among secondary school students in Jamaica. Parents’ “rarely” controlling the time students came in at night was inversely and significantly associated with lifetime use of alcohol, indicating that this factor was a protective factor. The reasons for this result are not clear but perhaps young people tend to assume more responsibility regarding

choices for their lives, health and school work when they perceive that parents or guardians have placed a certain level of trust and confidence in them. It may also be useful to conduct further research in order to ascertain the likely reasons for this outcome. Students who reported that their parents “sometimes” knew where they were, were 25% less likely to have consumed alcohol in the past year compared to students who reported that their parents “always” knew where students were. Parents who never and or sometimes knew where student was as opposed to those parents who always knew where the student was, appears to have acted as protective factor against alcohol consumption in the past month. Perhaps when students are given a reasonable amount of freedom they may tend to take responsibility for their decisions and behaviour including decisions regarding alcohol use and abuse. It may also be useful to conduct further research to try and ascertain the reasons as to why these observations from Jamaican differs from findings from elsewhere (Ledoux et al., 2002).

In conclusion, being from single-parent families as well as married-parent and common-law parent families was a risk factor for lifetime alcohol use. However, family structure (including single-parent families) was not significantly associated with alcohol use in past year and past month.

#### Conflict of Interest

The authors declare they have no conflict of interest.

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