



The Long-Term Impact of Family Background on the Onset of Substance Use in U.S-born and Foreign-born Young Adults in the United States

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Received: 30 March 2021

Accepted: 16 May 2021

Published: 03 June 2021

Abstract

This paper examines the onset of substance use among foreign-born and U.S.-born young adults in the United States, with consideration of the effects of acculturation, family structure, parent-child relationships, and the onset of using alcohol, cigarettes, marijuana, and illegal drugs. Results indicate using substances at an earlier age for the U.S.-born young adults than non-U.S. born. Higher participation in family activities plays the highest role among family background predictors in using later substances, however, low parental control, and parental divorce accelerate the initiation of illegal drugs.

Peer influence as a predictor of acculturation leads young adults to use substances in an earlier age particularly in using marijuana and illegal drugs. The analysis uses Kaplan-Meier survival estimates and discrete-time binomial logistic *regression* analysis. The data is used from the 1997 National Longitudinal Survey of Youth from 1997 to 2017.

Keywords: Family Process; smoking; drinking.

How to cite the article:

A. Roghani, *The Long-Term Impact of Family Background on the Onset of Substance Use in U.S-born and Foreign-born Young Adults in the United States*, *J. Hum. Ins.* 2021; 5(2): 19-34, DOI: 10.22034/JHI.2021.268845.1019.

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1. Introduction

The prevention of substance use is an important factor of health promotion in the transition to adulthood. Of the near, 74 million youths under 18 years of age were living in the United States in 2015 that 3.4 million were foreign-born (Bureau, 2017). Previous research illustrates that adolescents with an immigration background have less harmful patterns of consumption. However, foreign-born youths experience an increased risk of substance use as they become assimilated into US society (Blake et al., 2001). This study examines the onset of substance use among foreign-born young adults and explores the association between acculturation, family structure, parent-child relationships, and the onset of alcohol, cigarettes, marijuana, and illegal drugs.

Substance use rates are highly associated with the level of acculturation among first-generation immigrants (Unger et al. 2000; De la Rosa 2002; Marsiglia & Waller 2002). In the current research,

acculturation is operationalized as peer social influence, and language using at home, which are important predictors for cultural preferences of the host country (Cruz et al., 2016). Substance use behaviors are associated with peers modeling substance use and peer norms that encourage substance use (Kobus 2003; Valente 2003). Acculturating first-generation immigrants' young adults potentially access a greater divergent network of peers that may be a pro-substance peer. Previous studies indicated that young immigrants who have a higher social network of peers that use or access substances are more likely to use substances at an earlier age (Rai et al. 2003; Clayton et al., 2003). Besides, previous studies indicate that foreign-born adolescents who primarily speak another language than English with family and friends are less likely to use substances than adolescents who speak English with family and friends (Cruz et al., 2000).

Research by Vega (1990) indicates that a positive family environment and parent-child relationships

lead to later using substances among young adult immigrants. The values that Vega applied for the research were the level of closeness between parents and children and the use of family networks as a vital factor of emotional and social support. Therefore, the research indicated family relationships are a protective mechanism for adverse environments for foreign-born young adults. Measures of family background in the current study are the family structure, family routines, and parental control. Previous studies indicate that having a stable family structure during childhood is associated with a higher level of well-being in adulthood (Demuth & Brown, 2004). Children of divorce are more likely to show delinquent behavior and use substances than adolescents in intact families (Amato, 2001). Family routines or time spent doing an activity regularly as a family is associated with higher youth well-being and later transition to adulthood (Hoffman & Warnick, 2013; White & Halliwell, 2011; Roghani, 2020). For Instance, more frequent having meals during adolescence are associated with lower rates of depression and substance use (Musick & Meier, 2012). Another measure for the family background is parental monitoring that previous research shows young adults who are more monitored by their parents have less report of using alcohol and cigarettes at an earlier age (Griffin et al., 2000).

The current study longitudinally assesses the onset of substance use among immigrant and U.S.-born young adult's males and females. This study expands the previous research by mixing contextual variables such as peer influence and neighborhood characteristics with family backgrounds variable to find out how acculturation and acculturation stressors including family predictors may affect the timing of onset substance use. Moreover, although previous research studied family structure or qualitative aspects of childhood background (Vanassche et al., 2013; Douglas et al., 2002), this study considers both parental divorce and parent-child relationships at the same time. Lastly, previous research indicated there is a lack of research on how peer influence impact the timing of onset of substance use (Hartup, 2005; Chan et al., 2017), while this research not only examines four types of substance use including drinking, smoking, marijuana, and illegal drugs but also examines the effects of peer influences on each one separately.

2. Theoretical Framework

Acculturation

Acculturation is the process by which foreign-born individuals and their children acquire and accommodate the values, beliefs, language, and customs of the new country in which they live, including health behaviors such as dietary choices, physical activity patterns, and substance use. In

general, as people become more integrated into the U.S. culture, their health behaviors begin to resemble those of the mainstream U.S. culture, and they acquire the health risks associated with those behaviors (Everhart et al., 2009). Conversely, the behaviors and customs of the new arrivals also affect the culture of the destination country; residents of the destination country may adopt some of the values, linguistic terms, food preferences, and mannerisms of the immigrating group (Schwartz et al., 2007). Acculturation, therefore, can be viewed as the interchange that occurs when two different cultures come into contact.

Language at Home. Use of a non-English language at home often signals a connection to the culture of origin (Greenman & Xie 2008; Van Hook & Baker 2010), and for both first and later generation youth is a measure of the strength of attachment to origin country cultural norms. The previous research indicated young adults who speak English at home have more connections to the norms of the mainstream U.S. young adults' culture, including experimentation with higher involvement of using substances (McDonald et al. 2009). The research by Greenman and Xie (2008) shows for first and second-generation adolescents, English language use in the home is associated with earlier initiation of substance use.

Peer Influence. In the United States, higher acculturation is associated with improved English-speaking proficiency. This improvement is an important factor in higher interactions with their peers (Unger et al. 2000). Acculturating youth may have more peers than once had been unable to communicate with their friends. This leads them to access a larger or more divergent network of friends that is less likely among immigrant peer group (Gee et al., 2010). Therefore, youth with better English-speaking proficiency may have more substance peer influences, such as peers may offer or use illegal substances or consider drinking and smoking as normative (Manongdo, 2010; Clayton et al., 2003).

Family Background

Family Structure

Many theories dealing with the impacts of parental divorce on children's quality of life, some of the theories emphasize on directs the outcome of parental divorce on the well-being of children and others focus on the role of the intermediating family process (Fischer, 2004). Family structure theory and stress theory belong to the theories that directly consider the effects of parental divorce on children. Family structure states that higher family stability where the child is living with both biological parents is associated with higher socialization for children (Amato & Cheadle, 2008).

Stress theories have two subgroups. Acute stress theory indicates that parental divorce is associated with negative temporary outcomes for the quality of life of children. Chronic stress theory states that parental divorce leads to change many transitions in children's lives that have negative effects on young adult's behavior (Vanassche et al., 2013). Conflicts between parents, having new family compositions, and a drop in living standards are examples of negative outcomes of divorce for children (Hanson, 1999; Hoffmann, 2002). There is much evidence in the literature related to the above-mentioned theories. Children of divorce are more likely to use drugs (Hoffmann, 2002), use more often tobacco (Jenkins & Zunguze, 1998), and drink more alcohol (Miller, 1997) than children from intact families.

Family structure theory and stress theory focus on more broad and direct effects of parental divorce on children. In this study, I focus on two causal mechanisms that can be connected to negative outcomes among young adults. Having more routine with parents and parental monitoring have two casual mechanisms. In fact, parental divorce itself indicates negative outcomes on children, also the family process can have a crucial factor to change the timing of the transition adulthood elements such as the first family formation.

Family Routines. Family routines mean specific, repeated practices that involve at least two members of a family. The characters of family routines are made by communication between family members that involve a short time commitment, holding no unique meaning, and they are repeated in a regular time. Family routines have a potential and critical role in providing a better structure and emotional atmosphere of daily family life (Fiese et al., 2002). In addition, family routine is associated with family rituals that provide a structure that shapes an emotional climate for a higher quality of the home environment and reflect family identity, culture, and shared values (Spagnola & Fiese, 2007). Therefore, family rituals are important factors to assess the quality of the parental home.

Establishing positive family routines have a direct and proximal impact on young adults' outcomes. According to the Contextual Model of Parenting Style, parenting practices serve as the mechanisms by which parents seek to socialize their children. The warmth and demandingness of the house environment that is created by parents play a moderating influence that affects children's socialization. Therefore, parenting style is associated with children's achievement and healthy activities, which affects children's well-being and substance use. (Darling & Steinberg 1993). Family routine is one of the parental characteristics that are related to parenting style and a pleasant

atmosphere in the home that encourages a child to participate more in family activities such as having a meal, playing games, and going out with them. Young adults with fewer family routines are associated with a variety of high-risk behaviors including sexual activity, anti-social behavior, and lack of psychosocial well-being (Fulkerson et al, 2004; Douglas et al, 2002). Furthermore, several studies indicate that more family routines are associated with fewer cigarette smoking, alcohol use, and drug use (Nelson et al., 2003; Eisenberg et al., 2008).

Parental Control. According to Amato (2001), the family socialization process is one of the best predictors of the well-being of a child. Parental monitoring is one of the important aspects of the family socialization process. Parental control means that based on the behaviors toward the child, parents intend to direct the child's lifestyle acceptably. Positive monitoring is associated with fewer children's risky behavior (Fagan et al., 2012). The study by Crawford and Novak (2008) indicates that the association between family type and problem behavior becomes less after controlling parental monitoring by fathers. The results show a higher level of parental monitoring in intact families is associated with a lower level of alcohol drinking of young adults than children of divorced parents. In addition, higher parental control is associated with less drug use (Fagan et al., 2012).

3. Research Question and Hypothesis

Research Question No. 1. What is the association between acculturation and the onset of substance use among foreign-born and U.S.-born young adults? Acculturation in this research is operationalized by peer influence and language at home.

Research Question No. 2. What is the association between family background and the onset of substance use among foreign-born and U.S.-born young adults? To examine the effects of family background, parental control, family routines, and family structure will be used.

Hypothesis No. 1. It is expected more acculturated foreign-born young adulthoods are more likely to use substances in an earlier age. Therefore, using of English at home and having more peers that use substances is associated with an earlier substance use for foreign-born young adults in the United States.

Hypothesis No. 2. It is expected that lower parental control and family routines as predictors of parent-child relationships and parental divorce are associated with an earlier onset substance use for both U.S.-born and foreign-born.

4. Data and Method

I use the National Longitudinal Study of Youth 1997 (NLSY97), a prospective nationally representative survey of youth from the birth cohort 1980-84 who were living in the United States in 1996. In 1990, a list of housing units in selected areas of the United States were identified in order to start the interviews. Participants were selected by a random sample method and had a short interview to complete basic information of each household member. The first wave started in 1997 with 8,984 individuals when the participants were between the ages of 12 to 18. The respondents have been reinterviewed annually since then. These data provide information about employment, education, household, income, attitudes, expectations, crime, substance use, etc. In addition, it includes data from a resident parent or guardian at the first interview, which I use to identify family structure, and parent-child relationships. NLSY97 includes information on family dynamics, parental resources and some qualitative aspects of parent-child relationships, which allows me to study life course events during young adulthood. Therefore, this data can be a successful representation to find out timing and onset of substances use as a risky behavior among youth in the United States. The substances use histories were transformed into a life history file and due to lack of information for some individual characteristics and life course variables, the number of cases in the sample has been reached to 5001.

Discrete-time binomial logistic regression analysis is used to estimate the probability of substances use onset. In addition, Kaplan-Meier survival estimates are well suited for this method because it removes youth who had used substances by age 15 or after in each wave. The analyses are conducted with three models for each outcome. The first model is control with family background predictors, then a model is designed to assess acculturation variables. In the last one, I incorporate intervening measures of control variables with both acculturation and acculturation stressor, which mediate the relationship between family background and acculturation characteristics and substances use outcomes. To model duration dependence, the models include respondents' age in each year, measured continuously, as well as its square term.

5. Measures

Outcome Variables

Substance Use onset. The key outcomes are dichotomous variables measured at each age that denotes whether respondents had used substances including smoking, drinking, marijuana and illegal drugs by that age. At each wave, respondents in four different questions were asked whether they have ever smoked a cigarette, ever having had a drink,

have ever used marijuana, and ever used cocaine or other illegal drugs. If a respondent reported using one of the substances, in subsequent waves, the respondent was not again asked about using that substance.

Independent Variables

Migration Status. I operationalize immigrant generation as a dichotomous variables that combines foreign-born, and U.S. born young adults. In the first wave, NLSY97 asked respondents "*Were you born in the United States?*".

Parental Divorce. This variable is coded in three categories including living with two biological parents, divorced parents, children whose one of their parents died. In the first wave, children asked what was the reason you did not live with your both biological parents before age of 14. In addition to intact families and parents separated or divorced, I add parental death because a research by Teachman (2002) indicated that this group acted more similar to children of intact families in transition to adulthood than children from divorced parents.

Family routines. By using the Index of Family Routines, derived from the Family Routines Inventory (Jensen et al. 1983), family routine will be measured. This index has four questions that has range from 0 = No days per week to 7 = All 7 days per week and were asked in the first wave in 1997. The four questions were: 1) *In a typical week, how many days from 0 to 7 do you eat dinner with your family?* 2) *In a typical week, how many days from 0 to 7 does housework get done when it is supposed to, for example cleaning up after dinner, doing dishes, or taking out the trash?* 3) *In a typical week, how many days from 0 to 7 do you do something fun as a family such as play a game, go to a sporting event, go swimming and so forth?* 4) *In a typical week, how many days from 0 to 7 do you do something religious as a family such as go to church, pray or read the scriptures together?* The respondents had options to answer from 0 day to 7 days per week. Therefore, the potential range is from 0 to 28 and higher scores indicate more days spent in routine activities with the family. Family routine is coded from 0 to 7 as low, 8 to 14 as medium, 15 to 21 as high, 22 to 28 as very high.

Parental Control. I measured parental monitoring by means of a scale earlier used by Maccoby and Mnookin (1992) and was based on four questions asking if the young adult's mother know (1) *who are his or her friends;* (2) *who are his or her friends' parents;* (3) *who is your child with when he or she is not at home;* and (4) *his or her educational status and who are his or her teachers?* The parental monitoring scale is the sum of these four item scores and has a range from 0 to 16. Degree of parental monitoring by residential mother in the

current research is coded 0 to 8 as a low parental control versus 9 to 16 as high parental control.

Language use in the home. The NLSY97 baseline parent interview records whether English was used at home at the time of interview. The language use at home is coded as a dichotomous variable.

Percent of Peers who Use or Used Substances. In the first wave, respondents were asked percentage of peers that smoke and smoked. For drinking, NLSY97 asked respondents percent of peers get or got drunk at least once a month. In the other question, respondents were asked percentage of peers have or ever used marijuana, inhalants, or other drugs.

Control Variables. Models control for the gender and race/ethnicity of individuals. Gender of youth has two options including male and female. Race and ethnicity categories include Non-Hispanic White, Non-Hispanic Black, Hispanic, and other races including Asian, and American Indian. In addition, two life course events including educational status, and gang in neighborhood. The education status has four groups including individuals who had less than high school, high school, college degree and master and more. Gang in neighborhood measured as dichotomous, and NLSY 97 asked young adults in every wave that “*Are there any gangs in your neighborhood or where you go to school?*”.

6. Descriptive Statistics

Table 1 presents time-varying characteristics of the sample. Nearly 14 percent of the sample was foreign born youth and 86 percent of the sample was U.S. born. 76 percent of the sample youth who had intact families and more than 14 percent had parental divorce. Youth who reported low mother control was 48 percent of the sample, and those reported high control was 52 percent. Most of youth reported high and fair family routine respectively 49 and 33 percent respectively. Nearly, 20 percent of the sample speak other language than English at home. More than a half of the sample was non-Hispanic Whites, 27 percent were Black and 20 percent were Hispanic. 43 percent of the sample reported their peers never get or got drunk at least once a month, near 40 percent of them reported less than a half of their peers drunk at least once a month, and 17 percent reported more than a half of their peers got drunk. Young adults who reported none of their peers, less than a half, and more than a half smoking cigarettes were 26, 46, and 27 percent of the sample respectively. Close 40 percent of the sample reported none of their peers used illegal drugs and marijuana, and the percentage who reported less than a half and more than a half was 41 and 22 percent respectively. In terms of gender, 46 percent of the sample were men and 54 of them were women. Close to 18 percent of the

sample reported gang in their neighborhood and more than 90 percent of the sample had high school or less.

Table 2 represents the constant characteristics of each transition in the first wave for family predictors and who used substances in the last wave. Close to 14 percent of the sample was foreign-born. Near 80 percent of the sample was children from intact families. More than 20 percent of the sample reported high parental control by mother. More than a half of the sample reported high family routines and close to 34 percent had fair family routines. Around 22 percent of young adults have not reported drinking, and close to 50 percent of the sample have not smoked. Close to 15 percent of the sample used marijuana until the age of 35 and more than 10 percent have used illegal drugs.

Figure 1 represents survival function of using of four substances. The survival functions are stratified by gender and migration status. More than 70 percent of the sample have drunk until the age of 35 and all the groups had a similar rate of drinking in smoking more than 40 percent of the sample reported smoking for the first time and four groups had close rates. In smoking marijuana and using illegal drugs females of foreign had lower rates of using than others. U.S.-born males had higher rates that were 17 and 10 used marijuana and illegal drugs respectively. In using marijuana and illegal drugs foreign-born males and U.S.-born females had similar rates of using.

Table 1. Time Varying Characteristics
(NLSY97)

	Male %	Female %	Total %	Chi Square	P Value
Migration Status (c)				-3.27	**
Foreign-born	13.31	13.72	13.52		
Family Structure (c)				3.78	***
Intact Family	78.80	78.15	78.02		
Parental Death	6.74	6.70	6.68		
Parental Divorce	14.46	14.15	14.30		
Parental Control(c)				-2.15	*
High Control	47.53	55.62	51.59		
Family Routine (c)					
Low	9.71	9.78	9.74	17.17	***
Fair	33.86	33.79	33.83		
High	49.37	49.58	49.43		
Very High	8.06	6.95	7.00		
Language at Home (c)				1.28	
Not English	20.05	19.11	19.45		
Race/Ethnicity (c)					
White	54.49	48.81	51.65	16.69	***
Black	24.98	29.11	27.05		
Hispanic	19.25	21.23	20.25		
Other	1.28	0.85	1.03		
Gender (c)	46.12	53.88		8.21	***
Percentage of Peer Used Drinking (c)				15.09	***
None	47.94	39.29	43.61		
Less than a Half	38.23	40.47	39.35		
More than a Half	13.83	20.22	17.02		
Percentage of Peer Used Smoking (c)				16.19	***
None	28.83	23.38	26.12		
Less than a Half	47.51	45.74	46.62		
More than a Half	23.65	30.87	27.26		
Percentage of Peer Used Marijuana and Illegal Drugs (c)				16.16	***
None	41.29	34.63	37.92		
Less than a Half	40.03	42.52	41.28		
More than a Half	18.74	22.82	20.79		
Life course measures					
Gang in Neighborhood (t-v)				7.02	**
Yes	18.13	16.45	17.18		
Education Status				6.37	***
Less than High school	52.98	49.22	51.13		
High School	41.44	43.47	42.45		
College Degree	5.16	6.78	5.97		
Masters and more	0.42	0.53	0.45		
N Person-years at Risk	10511	13425	23936		

Table.2 Constant Characteristics
(NLSY97)

	Drinking		Smoking	
	Male %	Female%	Male%	Female%
Migration Status				
Foreign-born	13.29	15.49	13.26	16.63
Family Structure				
Intact Family	80.27	80.14	78.18	78.58
Parental Died	6.00	5.30	6.89	5.37
Parental Divorce	13.73	14.56	14.93	16.05
Monitoring by Residential Mother				
High control	26.00	32.81	25.16	31.73
Family Routines				
Low	9.16	8.94	9.97	9.56
Fair	33.12	30.98	33.75	31.09
High	50.88	53.02	50.25	52.91
Very High	8.84	9.06	8.03	8.44
Experiencing the Transition (Last Wave)				
No	21.74	23.48	45.34	54.34
N	2297	2654	2301	2675

	Marijuana		Illegal Drugs	
	Male %	Female%	Male%	Female%
Migration Status				
Foreign-born	12.91	14.41	12.28	13.35
Family Structure				
Intact Family	79.54	79.53	79.24	79.51
Parental Died	6.21	5.42	6.17	5.22
Parental Divorce	14.24	15.05	14.59	15.27
Monitoring by Residential Mother				
High control	25.51	31.57	22.45	30.54
Family Routines				
Low	10.11	9.99	11.09	10.87
Fair	32.19	30.79	29.69	29.91
High	51.81	53.21	52.38	52.78
Very High	7.89	8.01	8.74	8.24
Experiencing the Transition (Last Wave)				
No	83.24	86.64	89.11	92.34
N	2144	2543	2098	2512

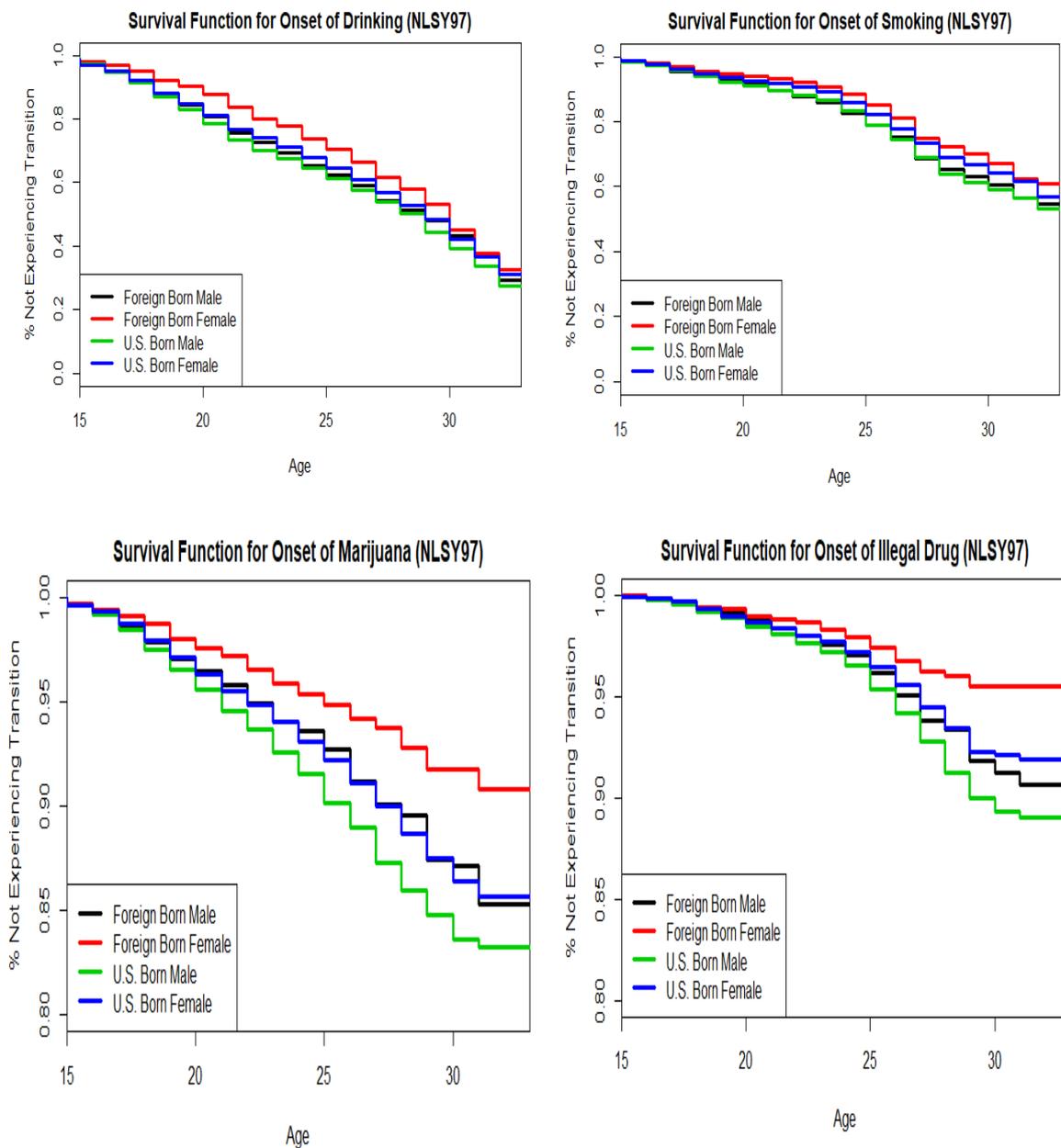


Figure 1

7. Results

Onset of Drinking. The first and second models (table 3 and figure 2) indicate U.S. born youth are more likely to drink in an earlier age. However, by intervention of controlling and other variables foreign born and U.S. born had a same timing of drinking for the first time. Children of divorce in the third model had 11 percent higher odds to make the transition earlier than children from intact families. Family routines had a significant relationship with the onset of drinking. Young adults who reported fair, high, and very high family

routine had lower odds that were 0.74, 0.63, and 0.44 respectively than young adults with low participation in family activities.

Regarding acculturation variables, respondents who used primary other languages than English are 30 percent less likely to make the transition than youth who used English with their parents. Young adults who had less than a half or more than a half percent of peers who get drunk at least once a month had near 1.15 odds higher than who reported almost none of peers get drunk. In the third model, individuals who reported gangs in their neighborhoods are more likely to have onset

drinking earlier than who reported no gang in their neighborhoods (odds=1.28). Blacks are less likely to drink in an earlier age (odds=0.62) and Hispanics had higher odds to make the transition (odds=1.14). Females are 37 percent less likely to drink for the first time in younger age than males. Individuals with less than high school had 0.87 odds to have onset drinking than individuals with high school degree.

Onset of Smoking. The model by family variables indicates foreign-born young adults has less odds than U.S. born to smoke in a younger age. However, two other models show the same odds but just the second one is significant. Growing up in an intact family is associated with less odds to earlier smoking. Young adults who reported vary high family routines are less likely to have onset of smoking in younger ages (odds=0.66) (table 3 and Figure 2).

Having less than 10 percent of peers who smoke cigarettes is associated with later smoking for young adults, and reporting more than a half of peers were smoking is associated with 25 percent higher likelihood to smoke. Living in an area with gangs is associated with having earlier onset of drinking. Blacks are less likely to make the transition than Whites (odds=0.79), while Hispanics are more likely than Whites to smoke when they were younger (1.09). Females are 36 percent less likely to have onset of smoking than males.

Onset of Marijuana. Foreign-born young adults are less likely to use marijuana in an earlier age than U.S. born and the odds are 0.52 and 0.62 in the first and second models respectively (figure 2 and table 4). Youth whose a parent or both parents died are less likely to have onset marijuana earlier than youth who grew up in intact families (odds=0.81), while children of divorce had higher odds (1.16). Young adults who had very high family routine are less likely to have earlier using marijuana than young adults who had low family routines (odds=0.66), while unexpectedly having fair family routine had higher odds than low family routine to have onset of marijuana (odds=1.24).

Reporting less than a half percentage of peers smoking marijuana is associated with 1.31 higher odds than none or less of peers used marijuana. In addition, individuals who reported more than a half is associated with 1.54 higher odds to smoke marijuana in a younger age. Individuals who live in a neighborhood with gangs more than twenty percent are more likely to make the transitions earlier. Whites are more likely to smoke earlier than Blacks and Hispanics. Like the two previous transitions, females are less likely to have onset of smoking marijuana.

Onset of Illegal Drugs. Being foreign-born is associated with less odds to use illegal drugs than

U.S. born in three models that are related to use illegal drugs. Parental divorce is associated with higher odds than growing in an intact family(odds=1.24). Unlike, other transitions that parental control is not significant, low mother control is associated with earlier using illegal drugs. Reporting having high and very high family routine is associates with lower odds to make the transition that were 0.68 and 0.52 respectively.

The peer influence variable in this model has the same result with smoking marijuana, which indicates more than 50 percent higher likelihood for who reported higher than fifty percent of peers used illegal drugs than who reported none or less than ten percent. Gang in neighborhood is associated with earlier transition to onset. Blacks had 0.44 odds versus Whites. Having less than high school is associated with higher odds to use illegal drugs (odds=1.44).

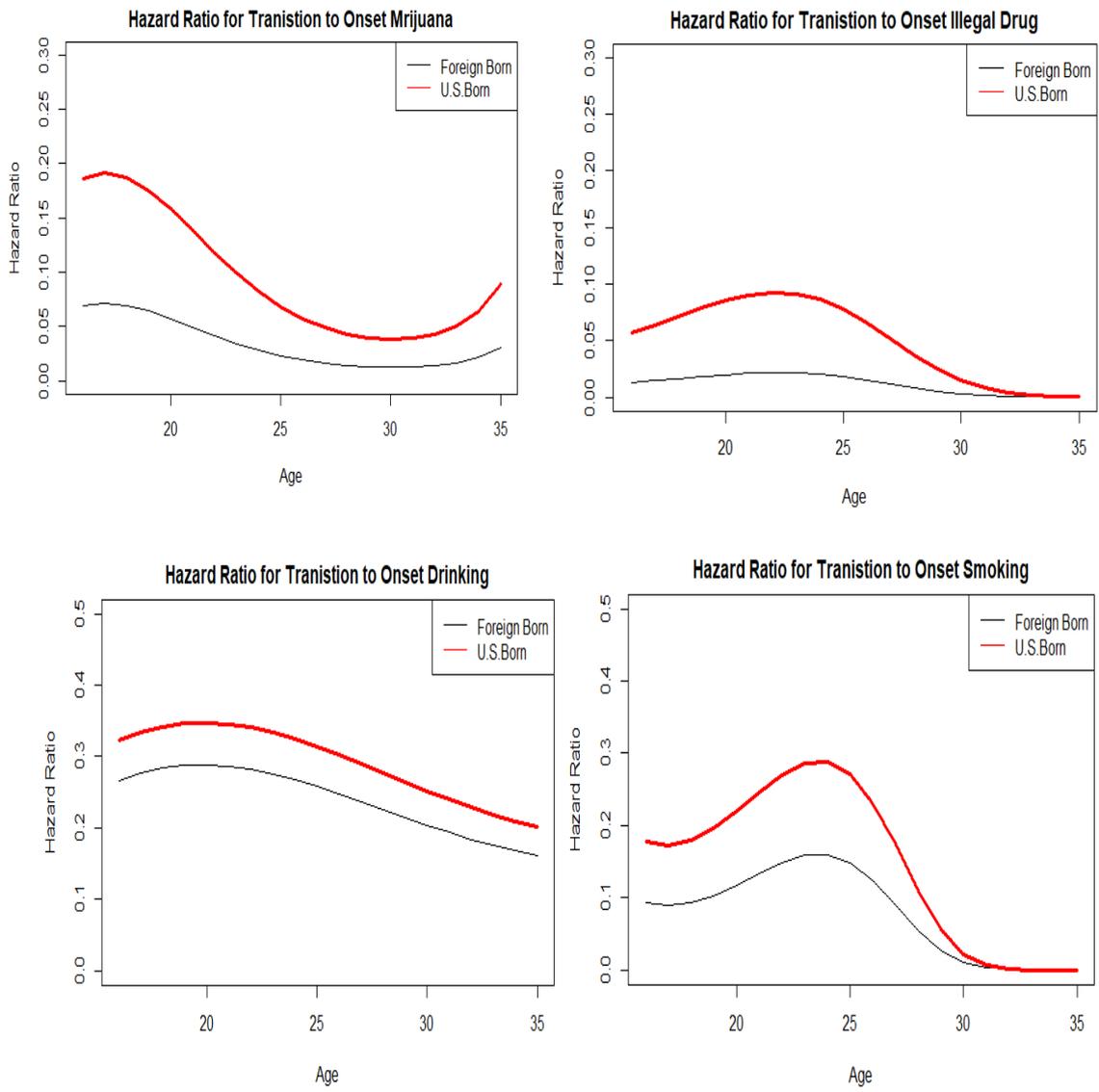


Figure 2

Table 3 Factors Predicting Drinking and Smoking (odds ratios), NLSY97

	Drinking			Smoking		
	Model 1	Model 2	Model3	Model 1	Model 2	Model3
Age(t-v)	1.31***	1.23***	1.32***	0.93*	0.88***	1.02
Age Square	0.99***	0.94***	0.99***	1.00	1.00***	0.99
Migration Status(c)						
<i>Non-Migrants(Ref)</i>						
1 st Generation	0.64***	0.74***	1.03***	0.82***	1.00**	1.00
Family Structure (c)						
<i>Intact Family (Ref)</i>						
Parental Death	0.97		1.06	1.11		1.19*
Parental Divorce	1.04		1.11*	10.06		1.10*
Monitoring by Residential Mother(C)						
<i>Low Control (Ref)</i>						
High Control	1.06		1.07	1.02		1.03
Family Routine (c)						
<i>Low (Ref)</i>						
Fair	0.78***		0.74***	1.06		0.99
High	0.65***		0.63***	0.98		0.87.
Very High	0.48***		0.44***	0.68***		0.66***
Language at Home (c)						
English						
Not English		1.04	0.70***		1.05	0.88
Percentage of Friends Used (c)						
<i>None or less than percent (Ref)</i>						
Less than a Half		1.15***	1.11*		1.19***	1.22
More than a Half		1.16**	1.04		1.25***	1.33
Gang in Neighborhood (t-v)						
<i>No (Ref)</i>						
Yes		1.12*	1.28***		1.35***	1.33***
Race/Ethnicity(c)						
<i>White(Ref)</i>						
Black			0.62***			0.79***
Hispanic			1.41***			1.09***
Other			0.73.			0.91
Gender (c)						
<i>Male (Ref)</i>						
Female			0.63***			0.64***
Education Status (t-v)						
<i>High School (Ref)</i>						
Less than High School			0.87*			1.22
College Degree			1.19.			1.38
Master and more			1.17			0.85

Table 4 Factors Predicting Using Marijuana and Smoking (odds ratios), NLSY97

	Marijuana			Illegal Drugs		
	Model 1	Model 2	Model3	Model 1	Model 2	Model3
Age(t-v)	1.72***	1.43***	1.95***	1.93***	1.76***	2.30***
Age Square	0.98***	0.98***	0.98***	0.98***	0.98***	0.98***
Migration Status(c) <i>Non-Migrants(Ref)</i>						
1 st Generation	0.52***	0.62***	0.87	0.32***	0.62**	0.42***
Family Structure (c) <i>Intact Family (Ref)</i>						
Parental Death	0.84+		0.81*	0.80+		0.85
Parental Divorce	1.13*		1.16*	1.16*		1.24**
Monitoring by Residential Mother(c) <i>Low Control (Ref)</i>						
High Control	1.05		1.00	0.84*		0.85*
Family Routine (c) <i>Low (Ref)</i>						
Fair	1.24**		1.19*	0.97		0.84+
High	0.93		0.93	0.75**		0.68***
Very High	0.66***		0.69***	0.53***		0.52***
Language at Home (c) <i>English</i>						
Not English		1.04	0.88		1.02	0.96
Percentage of Friends Used (c) <i>None (Ref)</i>						
Less than a Half		1.31***	1.32***		1.22***	1.27***
More than a Half		1.57***	1.56***		1.55***	1.50***
Gang in Neighborhood (t-v) <i>No (Ref)</i>						
Yes		1.19**	1.22**		1.47***	1.58***
Race/Ethnicity(c) <i>White(Ref)</i>						
Black			0.79***			0.44***
Hispanic			0.82*			0.81+
Other			1.36			1.47+
Gender (c) <i>Male (Ref)</i>						
Female			0.56***			0.72
Education Status (t-v) <i>High School (Ref)</i>						
Less than High School			1.39			1.44***
College Degree			1.14			1.14
Master and more			1.06			0.84

8. Conclusion

The results from the substances using in this research among U.S.-born and foreign-born young adults indicate using the substance at an earlier age for the U.S.-born young adults. Family background is considered as a significant acculturation stressor in the research to influence onset substance use of young adults in the United States. Low family routines and parental divorce are associated with earlier onset substance use. However, greater parental control was just associated with later using illegal drugs for the first time. Examining acculturation predictors indicates except later drinking alcohol is associated with using non-

English at home, but using other substances had no retaliation with non-using English at home. However, peer influence has a considerable effect on using substances at an earlier age particularly in using marijuana and illegal drugs.

Family routines seem to be the most vital factor that the family background predictors affect the timing of onset substance use among young adults. The effect of the family predictors often increases after adding acculturation and controlling variables that confirm the hypothesis for the effects of adverse family background on earlier onset substance use in young adults (Vega, 1990). Regarding acculturation measures, young adults with frequent substance-using peers are more

likely to have earlier using substances. Peer influence measures indicate that more than fifty percent higher odds for who reported more than a half of their peer used substances than who reported less than 10 percent of peer used (odds=1.50), while this ratio decreases in assessing drinking and smoking to around 10 percent. The results are consistent with the research by Urberg and colleagues (2003) that indicated peer influence appeared to be a more important factor in leading young adults into using marijuana but not smoking or drinking. This finding indicates that increased social acceptability among young adults for marijuana and illegal drugs is associated with using at an earlier age. This means young people perceive peer pressure to participate in substance use in order to be accepted by their peers. Therefore, according to the results by family background and acculturation predictors, it seems family routine and peer influence have higher impacts on the timing of using marijuana and illegal drugs but in an opposite direction.

The model that included family background variables indicates lower odds for foreign-born young adults to make the four transitions, while the examination of acculturation variables in the second model indicates a slight increase in to use of substances at an earlier age for foreign-born. However, in the last model by exploring links between family background, acculturation predictors, and controlling variables, foreign-born and the U.S born had a close or similar risk of smoking, drinking, and using marijuana for the first time.

However, U.S-born are more likely to use illegal drugs at an earlier age considerably. The results of the three structural equation models of using substances have two implications. First, although peer influence is considered a significant predictor for substance use in transition to adulthood, family background predictors such as family routines and parental divorce play an important role to prevent foreign-born young adults to have risky behaviors particularly in using marijuana and illegal drugs. Therefore, unacculturated young adults may be more affected by their parents and less influenced by their peers. Second, the relation between family structure and parent-child relationships on the one hand and using substances on the other hand is a complicated topic for research (Miller, 2000). However, the findings of this research demonstrate that although the family structure has significant relationships to use substances, qualitative parenting indicators such as family routines can be a buffer for young adults to have a healthier lifestyle. Therefore, living in an intact family is an important factor to decrease the probability to have risky behavior in the transition to adulthood, but this study indicates having positive family

environments that encourage children to have more activities with other members of a family is a greater factor to avoid early involvement in using substances.

There were several limitations to the current study. First, several of the measures such as family routines, and parental control answered by young adults, while answering these predictors by parents can provide a better insight to understand the effects of family on risky behavior. Moreover, information about the time past since the divorce, and measuring the level of conflict between the biological parents is a crucial factor to assess the effects of parental divorce (Linver et al, 2015). In addition, this study only measured two aspects of the acculturation process. Acculturation is a multidimensional process that includes other attitudes and behaviors that are not examined in the research (Sam, 2006). Further research needs to be conducted to understand which acculturation aspects are associated with young adults' substance use (Unger et al., 2000).

This study sought to utilize a large, nationally sampled dataset to assess the long-term impact of family background and acculturation among foreign-born young adults on the onset of substance use including drinking, smoking, using marijuana, and illegal drugs. In addition to peer influence as an indicator for acculturation, adverse family background is associated with using substances at an earlier age. Therefore, since the transition to adulthood is an insecure period for both foreign-born and U.S-born, a positive and stable family environment is a crucial factor to have higher well-being and for young adults both U.S-born and foreign-born.

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