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I. Alexandra E Capece, hereby submit this original work as part of the requirements for the degree of Master of Science in Health Education.

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Parental Influences on Hispanic Adolescent Heroin Use

Student's name: Alexandra E Capece

This work and its defense approved by:

Committee chair: Keith King, Ph.D.

Committee member: Rebecca Vidourek, Ph.D.



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Parental Influences on Hispanic Adolescent Heroin Use

University of Cincinnati

A thesis submitted to the

Division of Graduate Studies and Research University of Cincinnati

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Master of Science

In the School of Human Services of the College of Education, Criminal Justice & Human Services

By

Alexandra E. Capece M.S., University of Cincinnati 2013

Dr. Keith A King, Chair Dr. Rebecca A. Vidourek, Committee Member

Abstract

The purpose of this study was to examine the impact of parental factors on annual (past year) heroin use in Hispanic youth within the Greater Cincinnati area. The following research questions were examined for this study: 1) Do family structure, parental education, and parental job status impact Hispanic adolescents' annual heroin use? 2) Does the impact of these variables on Hispanic adolescents' annual heroin use differ based on sex and grade? Participants were Hispanic students in 7^{th} through 12^{th} grade (N = 946) in public and private schools within the Greater Cincinnati area. Logistic regression analyses revealed that annual heroin use differed based on family structure, parent education, and parent job status. Specifically, annual heroin use was significantly higher among students who did not live with their biological parents, students whose father had a high school diploma/GED or less, and students whose father was unemployed. Health professionals should consider these findings when developing drug prevention programs targeted toward Hispanic youth.

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Introduction

Heroin use is growing among adolescents in the United States and according to the 2012 National Survey on Drug Use and Health (NSDUH) more Americans are using heroin and marijuana today than in previous years (Substance Abuse and Mental Health Services Administration, 2013). Heroin use is especially becoming a problem among Hispanic youth as they are using drugs at alarmingly higher levels when compared to teens from other ethnic groups (Goldberg, 2013). A report conducted by the Substance Abuse and Mental Health Services Administration (2012) revealed that Hispanic teen use of marijuana, cocaine, heroin, and methamphetamine currently outpaces White and African-American teen use. In addition, the report indicated that Hispanic youth in 8th, 10th, and 12th grade outpace their African American and White counterparts in terms of current, annual, and lifetime use of cocaine, heroin, and methamphetamine. Results from the 2005 Monitoring the Future survey further highlight the drug problem among Hispanic youth, revealing that 12th grade Hispanic students reported the highest rate of use for some drugs, including heroin, compared to blacks and whites while 8th grade Hispanic students reported the highest rate of use for nearly all classes of drugs (Amaro & Cortes, 2007). Heroin use is associated with multiple consequences on one's physical, social, and mental health especially when drug use is initiated at an early age, which increases the likelihood for addiction.

There are numerous external influences that play an important role in drug use among teens, including family structure. Research has shown that children from non-traditional families, such as those who experience the negative consequences of family disruption and divorce, appear especially prone to detrimental social and behavioral outcomes, including drug use (Hemovich, Lac, & Crano, 2011). This remains true across most ethnicities, including Hispanic

individuals. Latino adolescents from two-biological parent families are less likely to use drugs than their counterparts from differently structured families (Amey & Albrectht, 1998). While Hispanics may tend to rely more on their families for social support than do Whites. However, one consequence of this reliance is that disruptions in family relationships may lead to drug use as a form of rebellion against family control (Strait, 1999). Relative to intact families, children of single parent families generally are more likely to be resource deprived, especially in female-headed households, thus receive less intense and consistent monitoring which has been associated with adolescent drug use (Hemovich & Crano, 2009).

A study by Jenkins and Zunguze (1998) examining family structure related to drug use among 2,121 students in 8th, 10th, and 12th grades found that adolescents from father-headed single parent families reported more frequent use of liquor than did adolescents from the other family structures, and more frequent beer and overall gateway drug use than did adolescents from the intact and mother-headed single-parent groups. Another study by Macleod et al. (2013) examined 432 individuals presenting at a community health facility with injection drug use and found that compared to two-parent families all other family structures were associated with increased risk of injection use. The study also found that the strongest risk factors for later injecting were always having lived with a relative or family friend (not always a parent) and in care/adopted/foster home at any point. These findings support the contention that adolescents may be at increased risk for substance use if they live in single parent family homes.

Hemovich and Crano (2009) conducted a study analyzing data from the Monitoring the Future survey, which examined a nationally representative cross-sectional sample of 8th to 12th grade adolescents in rural and urban schools from across the United Sates. They investigated further into the role family structure plays on both genders, specifically the same-sex hypothesis,

which holds that children of the same sex as their single parent are less likely to experience socioemotional disadvantage than children raised by a parent of the opposite sex. The results showed that drug use among daughters living with single fathers significantly exceeded that of daughters living with single mothers, while gender of parent was not associated with son's usage. This is consistent with findings from a different study conducted by Hemovich, Lac and Crano (2001), which found that overall, riskier patterns associated with substance abuse were most pronounced in father-only households and least evident in dual parent households.

A study by Pan and Farrell (2006) examined data from the National Longitudinal Study of Adolescent Health to assess whether single mother families serve as a buffer against adolescent drug use. This study found that supportive mothers appear to buffer the effects of family structure on drug use. The results also showed that Hispanic mothers support buffers the effects of single mother families on delinquency and drug use but not heavy drinking. Deleire and Kalil (2002) found similar results in their study using data on 11,213 adolescents from the National Educational Longititudinal Survey. They found that teenagers living with their single mothers and with at least one grandparent in multigenerational households have developmental outcomes that are at least as good and often better than the outcomes of teenagers in married families.

Specifically regarding Hispanic family structure and adolescent drug use, Delva et al. (2005) examined Monitoring the Future data to assess youth marijuana, cocaine, and alcohol use. Results showed that the likelihood of drug use was estimated to be significantly higher among adolescents who did not live with their parents than among adolescents who lived with both parents across all Hispanic groups and drugs studied. Wagner, Ritt-Olson, Soto, and Unger (2008) conducted a study with 225 ninth-grade students, 85% of whom were Latino. This study

found that students who lived in single parent households (mother or father only) were no more likely to have ever used drugs as those who lived in two-parent households, however, students who lived with older siblings were significantly more likely to have ever used alcohol than students who did not live with older siblings. Additional research is clearly needed.

The education level of an adolescent's parent also can play a role in their drug use patterns. A study conducted by Bachman, O'Malley, Johnston, Schulenberg and Wallace (2011) analyzed 1999-2008 Monitoring the Future data and found that high proportions of Hispanic students had parents with the lowest level of education, but they also had relatively low levels of substance use. However, among white students, 8th and 10th graders showed strong negative relations between parental education and substance use. Goodman and Huang (2002) conducted a study on the role socioeconomic status plays on tobacco, alcohol, marijuana, and cocaine use among US adolescents. The findings showed that socioeconomic status was associated with use of all four substances but the relationship was not consistent across socio-economic status (SES) indicators or across race/ethnicity groups. Among Hispanic teenagers, an increase in SES was associated with increased cigarette use and increase in education was also positively related to marijuana use.

Studies have found interesting correlations between SES and youth drug use, however, additional studies need to be conducted to confirm this data. More research is needed to develop a more complete understanding of the relationship between parental structure, parental job status, parental education, and Hispanic adolescent drug use. In an attempt to address gaps in the professional literature on this topic, this study examined the parental factors on annual heroin use among Hispanic youth within the Greater Cincinnati area. The following research questions were addressed:

- 1) Do family structure, parental education, and parental job status impact Hispanic adolescents' annual heroin use?
- 2) Does the impact of these variables on Hispanic adolescents' annual heroin use differ based on sex and grade?

Methods

Participants

Participants in this study were students who self-identified as Hispanic in 7^{th} through 12^{th} grade (N = 946) in public and private schools within the Greater Cincinnati area. The Coalition for a Drug Free Greater Cincinnati was responsible for recruiting the students. Participation was voluntary for both the schools and students. The parents had the option to not have their children participate and they could be excluded from the survey. All of the responses were anonymous. *Instrumentation*

The following sections/items of the PRIDE Survey for grades 7-12 were used in this study: (1) Family structure; (2) Parental education level; (3) Parental job status; and (4) Annual Heroin Use. Regarding family structure, students were asked to indicate if they live with: both parents; mother only; father only; mother & stepfather; father & stepmother; or other. Regarding parental education, students were asked to indicate the highest education level of their mother and father: some high school or less; high school graduate; some college; or college graduate. Regarding parental job status, students were asked to indicate the employment status of their mother and father: Yes, full-time; Yes part-time; or No.

The survey was written in English and had been previously tested for validity and reliability. Stability reliability was established by distributing the survey to a sample of students (N = 631) on two occasions one week apart in Pearson correlation coefficients ranging from .814

to .851 (Metze, 2000). The survey has also been shown to be valid and reliable with percent agreements of greater than 80% on most variables (Craig & Ernshoff, 1987).

Procedures

This study was granted approval by the Institutional Review Board. The surveys were administered to the students after they were informed of the study purpose, voluntary nature of the survey, confidentiality of responses, and importance of providing honest answers. Every student who was in school on the day of survey administration was given a survey to complete and they were instructed to skip items they did not wish to answer. Once surveys were complete, students placed them in an envelope. The teachers then turned in the envelope to the office staff to be sent out for data entry and analysis.

Data Analysis

Data was entered and analyzed using the SPSS statistical software package. Frequency distributions (ranges, means, standard deviations) were used to determine student demographics and frequency of involvement in heroin use. The independent variables (family structure, parental education level, and parental job status) were dichotomized into two levels, which resulted in the following: family structure (live with biological parent[s], do not live with biological parent[s]); parental education (high school diploma/GED or less, some college or more); parental job status (unemployed, employed [part-time or full-time]). Logistic regression analyses were computed to assess whether annual heroin use differed based on family structure, parental education, and parental job status. The alpha level of significance was set at .05.

Results

There were 946 Hispanic students in grades 7th through 12th in participating schools who completed the survey. Approximately half of the students were female (48.5%) and the other half

were male (51.5%) (Table 1). Students in grades 7th and 8th comprised 33.7% of the sample and students in grades 9th through 12th made up 66.3% of the sample. The data showed that 41.2% of students reported not living with their biological parents while 58.8% reported living with their biological parents. Concerning education level of the father, 43.2% reported their father had a high school diploma/GED or less while 56.8% reported their father had some college education or more. Data showed that in regards to the education level of the mother, 45.6% reported their mother had a high school diploma/GED or less while 54.4% reported their mother had some college education or more. Regarding father job status, 6.9% of students reported their father did not have a job and 93.1% reported their father was employed part-time or full-time. Regarding mother job status, 26.6% of students reported their mother did not have job and 73.4% reported their mother was employed part-time or full-time. In regards to annual heroin use among students, 8.6% reported having used heroin in the past year, .9% reported having used heroin in the past month, and 4.9% reported having used heroin every day.

Data showed that males (11.4%) were significantly more likely to have used heroin in the past year than females (5.2%), OR= 2.335 (95% CI= 1.371, 3.975) (Table 2). In the past year, students in 9^{th} through 12^{th} grade (10.3%) were significantly more likely to have used heroin than students in 7^{th} and 8^{th} grade (2.7%), OR= 4.171 (95% CI= 1.969, 8.836).

Impact of Parent Factors on Heroin Use among Male and Female Youth

Regarding family structure, males (8.3%) and females (3.1%) who lived with their biological parents were significantly less likely than males (16.8%) and females (7.6%) who did not live with their biological parents to have used heroin in the past year (Table 3).

Regarding father education level, males (11.5%) and females (4.4%) who reported their father had some college education or more were significantly less likely than males (14.2%) and females (6.8%) who reported their father had a high school diploma/GED to have used heroin in the past year (Table 3). Regarding mother education level, males (11.6%) whose mother had a high school diploma/GED or less had slightly lower rates of heroin use as males (13.5%) whose mother had some college education or more. Females (4.2%) whose mother had a high school diploma/GED or less had slightly lower rates of heroin use as females (5.9%) whose mother had some college education or more.

Regarding father job status, males (8.5%) and females (3.3%) whose father was employed (part-time or full-time) were significantly less likely than males (63.6%) and females (34.8%) whose father was unemployed to have used heroin in the past year (Table 3). Regarding mother job status, males (11.1%) and females (3.3%) whose mother was employed (part-time or full-time) were significantly less likely than males (13.9%) and females (8.4%) whose mother was unemployed to have used heroin in the past year.

Impact of Parent Factors on Heroin Use among Junior High and High School Youth

Annual heroin use among Hispanic adolescents was also evaluated based on grade level for family structure, parental education, and parental job status. Concerning family structure, junior high school students (3.4%) who did not live with biological parents had slightly higher rates of heroin use than junior high school students (2.3%) who did live with biological parents (Table 4). High school students (13.7%) who reported not living with biological parents had higher rates of heroin use than high school students (8.2%) who reported living with biological parents.

Regarding father education level, junior high school students (3.4%) who reported their father had a high school diploma/GED or less and junior high school students (3.9%) who reported father had some college education or more had similar rates of heroin use (Table 4). High school students (10.2%) who reported their father having some college education or more had slightly lower rates of heroin use than high school students (11.6%) who reported their father having a high school diploma/GED or less. Regarding mother education level, junior high school students (2.8%) and high school students (10.6%) whose mother had a high school diploma/GED or less were significantly less likely than junior high school students (3.7%) and high school students (11.4%) whose mother had some college education or more to have used heroin in the past year.

Regarding father job status, junior high school students (2.9%) and high school students (7.8%) whose father was employed (part-time or full-time) were significantly less likely than junior high school students (11.1%) and high school students (48.7%) whose father was unemployed to have used heroin in the past year (Table 4). Regarding mother job status, junior high school students (0%) who reported their mother being unemployed were significantly less likely than junior high school students (4%) who reported their mother being employed (part-time or full-time) to have used heroin in the past year. High school students (9.3%) who reported their mother being employed (part-time or full-time) were significantly less likely than high school students (13.2%) who reported their mother being unemployed to have used heroin in the past year.

Discussion

Results of this study showed that males were significantly more likely than females to have used heroin in the past year. Heroin use was also significantly higher among high school

students (9th-12th grade) compared to junior high school students (7th-8th grade). These results are similar with previous studies, which have found that traditional gender role attitudes might encourage Latino substance use while cultural norms discourage substance use by women (Alvarez, Jason, Olson, Ferrari, & Davis, 2007). One traditional gender role among male Latinos is *machismo* which may play a factor in the higher rates of drug use seen.

This study found that regarding family structure, heroin use was higher among Hispanic adolescents who did not live with their biological parent(s) compared to those who did live with their biological parent(s). Logistic regression analyses indicated that in all categories, except junior high school students, heroin use, differed significantly based on family structure. Other studies have found similar results that children of disrupted families are at a higher risk of initiating the use of controlled substances (Flewelling & Bauman, 1990). A possible explanation for this increased use is that single parents may be less able to provide consistent supervision and monitoring of their children, therefore youth from single parent families may have more opportunities to experiment with substance abuse compared to youth from two-parent households (Wagner et. al, 2010). Adolescents who have two parents also may receive more care and attention compared to adolescents living in single-parent families whose parent is busy serving as the sole provider for the family. Two-parent families also may have the ability to divide parental duties, thus providing a more complete and constant social interaction between themselves and their children. Additional research needs to be completed to further explain the reasoning behind this occurrence.

Regarding parental education level, interestingly this study found that heroin use was higher among males whose mother had some college education or more and slightly higher among males whose father had some college education or more. Comparing this to females,

heroin use was lower if their father had some college education or more and if their mother had some college education or more. The study also found that heroin use did not significantly differ based on father and mother education level among junior high school and high school students. These findings are similar among other studies which indicate that low parental education appears to be a risk factor for substance use among White students, whereas substance use among African-American and Hispanic students is not strongly linked with parental education (Bachman, O'Malley, Johnston, & Schulenberg, 2010). This may be due to the fact that Hispanic adults lack the same opportunities as White adults to achieve an education, which is the key to a better future. For many Hispanic individuals there are cultural and institutional barriers to achieving a quality education (Couretas, 1994). However, females may be more at risk for the effects of low parental education than males and may be more likely to resort to drug use if they do not have well-educated and successful parents providing guidance. Lower education levels are generally associated with a lower socioeconomic status, which can result in fewer opportunities for adolescents and may contribute to higher levels of drug use.

Regarding parental job status, this study found that both males and females had significantly higher levels of heroin use if their father did not have a job compared to fathers who were employed (part-time or full-time). Females also had significantly higher levels of heroin use if their mother did not have a job, while males were not as affected by mother job status. Heroin use was highest among both junior high school and high school students whose father did not have a job. Logistic regression analyses indicated that in all categories, except male heroin use based on mother job status, results were significantly different. These results are similar to other studies which indicate that limited social and economic resources contribute to parental

stress, child abuse and neglect, damaged parent-child relations, and family breakup (Office of the Surgeon General, 2001). Such factors place youth at elevated risk for substance use.

Overall this study found that family structure and parental job status affect heroin use among male, female, junior high, and high school Hispanic adolescents. Heroin use was significantly impacted by family structure, specifically higher levels of use among adolescents who did not live with their biological parent(s). Adolescents who grow up in single parent families may not receive the necessary care and involvement compared to those living in two-parent families. Parental unemployment also significantly increased the heroin use among Hispanic adolescents. Youth growing up in homes with lower income may not have as many resources and opportunities available to them, increasing their risk for involvement in deviant behavior. Interestingly the parental education level did not have a significant effect on heroin use among males or females, supporting the idea that there are cultural differences among factors affecting heroin use in Hispanic adolescents.

Study Limitations

The main limitation of this study is that participants were students from the Greater Cincinnati area, thus, the results may not be generalized to students in other geographic areas. The data was also collected by self-report via the students, which could have led to a bias in which some students may have responded to the questions in socially desirable ways.

Recommendations for Future Research

This study provided valuable findings that add to the current literature and enhance the understanding of how family structure, parental education, and parental job status impact Hispanic adolescent heroin use. The results of this study can help professionals in the health field determine the major factors that impact heroin use among Hispanic adolescents and then create

programs and education strategies to specifically address these factors. The study also helps to further highlight the numerous cultural differences among adolescent heroin use rates. Drug prevention strategies need to focus on specific culture factors in order to be successful.

Additional research is needed to further explore more in depth how each of these factors affect Hispanic adolescent heroin use. Future studies should examine the relationships among multiple family structures including adolescents who live with older siblings and/or grandparents. There also needs to be increased research on other parental variables possibly impacting heroin use among Hispanic adolescents, including parental heroin and other drug use, parental attitudes toward youth drug use, and parental rules and communication regarding youth drug use.

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Table 1. Demographic and Background Characteristics

Item	n	%	
Sex			
Female	414	48.5	
Male	439	51.5	
Grade			
7 th - 8 th Grade	311	33.7	
9 th -12 th Grade	611	66.3	
Living Situation			
Live with Biological Parent(s)	545	58.8	
Do not live with Biological Parent(s)	382	41.2	
Educational Level of Father			
High school diploma/GED or less	319	43.2	
Some college or more	420	56.8	
Educational Level of Mother			
High school diploma/GED or less	357	45.6	
Some college or more	426	54.4	
Job Status of Father			
Unemployed	57	6.9	
Employed (part-time or full-time)	765	93.1	
Job Status of Mother			
Unemployed	228	26.6	
Employed (part-time or full-time)	628	73.4	

Notes: Percents denote valid percents; Missing values excluded; N= 946

Table 2. Heroin Use Past Year by Sex and Grade

Heroin Use Past Year

Variable	Did not use in past year	Used in past year	OR	(95% CI)
Sex	n (%)	n (%)		
Female	382 (94.8%)	21 (5.2%)	2.335	(1.371, 3.975)**
Male	374 (88.6%)	48 (11.4%)		
Grade				
7 th /8 th Grade	291 (97.3%)	8 (2.7%)	4.171	(1.969, 8.836)***
9 th /12 th Grade	532 (89.7%)	61 (10.3%)		

Notes:

N= ; Percent's refer to valid percent's; Missing values excluded *** p < .001; ** p < .01; *p < .05

Table 3. Odds Ratio for Annual Heroin Use among Females and Males by Family Structure, Parent Education, and Parent Job Status

	Females				Males			
	Did Not Use in Past Year n (%)	Used in Past Year n (%)	OR	(95% CI)	Did Not Use in Past Year n (%)	Used in Past Year n (%)	OR	(95% CI)
Family Structure								
Do not live with biological parent(s) ^a	158 (92.4%)	13 (7.6%)	.387	(.151, .991)*	124 (83.2%)	25 (16.8%)	.451	(.244, .832)**
Live with biological parent(s)	220 (96.9%)	7 (3.1%)			242 (91.7%)	22 (8.3%)		
Father Education Level								
High school diploma/GED or less a	123 (93.25%)	9 (6.8%)	.628	(.236, 1.674)	127 (85.8%)	21 (14.2%)	.787	(.415, 1.494)
Some college or more	174 (95.6%)	8 (4.4%)			169 (88.5%)	22 (11.5%)		
Mother Education Level								
High School Diploma/GED or less ^a	144 (94.1%)	9 (5.9%)	.703	(.265, 1.869)	145 (88.4%)	19 (11.6%)	1.188	(.632, 2.235)
Some college or more	182 (95.8%)	8 (4.2%)			167 (86.5%)	26 (13.5%)		
Father Job Status								
Unemployed ^a	15 (65.2%)	8 (34.8%)	.065	(.023, .185)***	8 (36.4%)	14 (63.6%)	.053	(.021, .138)***
Employed (part-time or full-time)	318 (96.7%)	11 (3.3%)			321 (91.5%)	30 (8.5%)		
Mother Job Status								
Unemployed a	87 (91.6%)	8 (8.4%)	.367	(.137, .979)*	87 (86.1%)	14 (13.9%)	.777	(.395, 1.528)
Employed (part-time or full-time)	267 (96.7%)	9 (3.3%)			248 (88.9%)	31 (11.1%)		

Notes:

^a Indicates Referent
^b All categories do not total 946 due to missing data
*** p < .0001; ** p< .01; * p< .05

Table 4: Odds Ratio for Annual Heroin Use among Junior High and High School Students by Family Structure, Parent Education, and Parent Job Status

	Junior High School (7 th -8 th Grade)				High School (9 th -12 th Grade)			
	Did Not Use in Past Year n (%)	Used in Past Year n (%)	OR	(95% CI)	Did Not Use in Past Year n (%)	Used in Past Year n (%)	OR	(95% CI)
Family Structure								
Do not live with biological parent(s) ^a	115 (96.6%)	4 (3.4%)	.669	`(.164, 2.727)	202 (86.3%)	32 (13.7%)	.563	(.244, .832)*
Live with biological parent(s)	172 (97.7%)	4 (2.3%)			325 (91.8%)	29 (8.2%)		
Father Education Level								
High school diploma/GED or less ^a	86 (96.6%)	3 (3.4%)	1.165	(.271, 5.006)	191 (88.4%)	25 (11.6%)	.866	(.489, 1.534)
Some college or more	123 (96.1%)	5 (3.9%)			247 (89.8%)	28 (10.2%)		
Mother Education Level								
High School Diploma/GED or less ^a	106 (97.2%)	3 (2.8%)	1.370	(.320, 5.863)	211 (89.4%)	25 (10.6%)	1.089	(.626, 1.896)
Some college or more	129 (96.3%)	5 (3.7%)			248 (88.6%)	32 (11.4%)		
Father Job Status								
Unemployed ^a	8 (88.9%)	1 (11.1%)	.238	(.026, 2.174)	20 (51.3%)	19 (48.7%)	.089	(.044, .180)***
Employed (part-time or full-time)	235 (97.1%)	7 (2.9%)			462 (92.2%)	39 (7.8%)		
Mother Job Status								
Unemployed ^a	72 (100%)	0 (0%)	1.042	(1.013, 1.072)	125 (86.8%)	19 (13.2%)	.777	(.395, 1.528)
Employed (part-time or full-time)	190 (96.0%)	8 (4.0%)			369 (90.7%)	38 (9.3%)		

Notes:

^a Indicates Referent
^b All categories do not total 946 due to missing data
*** p <.0001; ** p<.01; * p<.05