
Predictors of School Dropout among Adolescents in Puerto Rico

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Objective: This research aims to understand the circumstances associated with school dropout in a cohort of Puerto Rican adolescents.

Methods: The study collected data from adolescents and their parents. Information related to school dropout among adolescents was obtained from the second year follow-up data from the longitudinal study funded by NIDA “Risky Families Embedded in Risky Environments” (Grant No. RO1 DA 15301). Data was collected employing a self-administered and a face-to-face interview protocol. Prediction of school dropout was assessed throughout adolescent characteristics, family background, school experiences and behaviors.

Results: During the second follow-up, two years after the baseline assessment, approximately 6.2% of the adolescents reported dropping out from school. Logistic regression analysis indicates that older

adolescents (OR=6.6, 1.37-31.67), whose mother used drugs during pregnancy (OR=4.9, 1.31-17.91), who reported high rates of absenteeism (OR=4.8, 1.63-14.13), high school grade retention (OR=3.7, 1.14-12.05), and attended school where teachers were attacked or wounded by students (OR=7.0, 1.44-34.17) were more likely to dropout of school.

Discussion: These findings emphasize the need to further understand the effects of different elements of adolescents’ environment such as family and school. It has been posited that dropping out of school is a process whose characteristics can be detected long before it occurs. The fact that students who dropout are more likely to report skip classes and grade retention can be relevant elements in prevention and early intervention for teachers and other school personnel.

Key words: Puerto Rico, Adolescents, Dropout, School, Parents, Hispanic

Studies show that a significant percentage of adolescents from 13 to 19 years old are engaging in behavior that endangers their physical and social health, well-being, and their ability to establish a career goal, which is one of the most important decisions made during adolescence (1). Possessing a career goal serves as a protective factor for adolescents, who are then able to form positive self images, a future-oriented component based on what they know about their competencies, and the ability to follow school normative-prescribed behaviors such as better school attendance and school attachment (2).

It is estimated that one third of all adolescents have engaged in risk-taking behaviors at least once during their adolescence (3-6). Although adolescents are

generally a high-risk group, youth living in poor inner city neighborhoods may be especially vulnerable to negative outcomes. Studies have documented that inner city youth experience high levels of stress, poverty, and exposure to violence, all behavioral and emotional factors related to educational attainment and dropping out from school (6-10).

According to Mather (11), the number of Puerto Rican children in Puerto Rico decreased 5% while the number of US children increased 14%. This decline has been related to a deductive in the Puerto Rican fertility rates and migration of Puerto Rican families to the US mainland. In 1999, over half of the Puerto Rico’s children living below poverty level dropped from 18 to 16%. Puerto Rico’s high school dropout rate decreased from 22 to 14% between 1990-2000, while the US dropout rate was 10% in 2000. Moreover, the estimate of dropout rate based on the calculation of the percent of population aged 16 to 19 years not attending school and who have not completed high school graduates. According to this calculation in 2005, Puerto Rico accounted for 11% of dropouts compare with 14% among Hispanic in United States (11). The US Census for 2007 (12) reported that 19% of Puerto Rican ages 18 – 24 have less than high school or the equivalent.

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In addition, estimates show that more men (24.2%) were less likely to have a high school diploma than women (13.8%). For the United States population ages 18 – 24 years the rate account for 17.1% males and 14.3% females. Thus, it seems that Puerto Rico's children are less likely to obtain a high school diploma than children in the United States.

There are severe economic implications for the adolescents and society from dropping out of high school. Specifically, the economic impact of school dropouts is reflected in career options and earning potential. Over their lifetime, high school dropouts can expect to earn significantly less income than students who graduated from high school (13). School dropouts are also at increased risk for unemployment and to be welfare recipients (14). However, educational attainment is significantly important as a critical and potential modifiable component of stratification hierarchies such as a ladder for improvement of socioeconomic status (15).

This research attempts to understand the circumstances under which a cohort of Hispanic youth residing in poor households and neighborhoods dropout of school in Puerto Rico. The study is guided by a conceptual framework that sees dropping out and educational attainment as a process (not so much as event) of progressive academic disengagement that often traces back to the youth's earliest experiences at home and at school, starting in the first grade (16-17). This process takes shape through a longitudinal process that takes place within the social context of various social systems that influence academic development (18). Early systems of influence can be placed on the ecological social context perspectives of school, home, and community (14). Stress, frustration, self-esteem, and a record of poor performance in school causes children to question their competencies and weakens their ability to maintain attachment to school (19). Finn (19) also posits that strong or weak school attachment is the result of the cumulative circumstances and experiences in school through previous developmental periods. A recent study by White and colleagues (20) shows that non-college students reported higher rates of substance use and related problems while still in high school which might have affected their academic achievement and ability to get into college. These findings contribute and demonstrate the importance of understanding educational attainment and dropping out as a process that needs to consider preexisting characteristics, such as previous school experiences, propensity of individuals for deviance, and underlying risk factors for non-college bound youths, while still in high school.

Experiences at home are critical to adolescent academic achievement; through helping with homework, monitoring school progress, and participating in school activities, parents can insulate their children from failure by promoting positive school adaptations and school attachment (21-23). However, poor parents work against their environment of poverty and are likely to lack the financial resources to purchase commodities (e.g. books, personal computers) that facilitate their children's success in school and their educational progress. We assume that experiences in the neighborhood also influence academic attainment by providing schools that care about youth needs, have flexible curriculums, and have activities that promote school attachment. Neighborhoods can also help by providing roles models in the form of resilient individuals that have been achievers despite the stressors of poverty. Guided by the Social Context Model (24-28), this paper is concerned with the impact of three elements of environment in which the individual develops family, school and neighborhood in the process of dropping out of school among adolescents residing in poor inner city neighborhoods in Puerto Rico.

Methods

Subjects and Recruitment Process

The sample was selected from a longitudinal study examining drug-use risk and resilience among a cohort of adolescents living in families with drug and/or alcohol-using parents and residing in risky neighborhoods. Of 720 eligible families, 693 parents and their adolescent offspring consented to participate, providing 96% of the eligible sample baseline. For the purpose of this analysis we included 546 adolescents (ages 14 to 18) who were currently enrolled and followed two (2) years from baseline in school to know their dropout status. Risky neighborhoods were defined as neighborhoods with at least three (3) coping areas (drug-selling venues) in the municipality of San Juan, Puerto Rico. The sampling frame included all census sectors with coping areas and enumerated households with at least one adolescent 12 to 15 years old. Outreach workers visited eligible households and contacted parents to invite them to participate. In the case that two or more adolescents were eligible, one was randomly selected as the study subject. Confidentiality and voluntary participation issues were discussed with all subjects and assurance was given that their decision to participate would have no impact on their ability to stop the interview at anytime during the process. The informed consent forms and all study activities were reviewed and approved by the Universidad Central del Caribe School of Medicine Human Subjects Institutional Review Board.

Measures

Dependent Variable

The dependent variable is dropout status in the second follow-up of the study, when the participants should have been approaching high school or have already graduated. A dropout is defined as someone who was not currently enrolled in school or had not already obtained a high school diploma or a General Education Development (GED) certificate.

Predictor Variables

- Adolescent's gender was used as: 1=male and 0=female, and adolescent's age was collected as a continuous variable.

- Academic achievement was measured by a single item – youths' self-report of their average grade during the previous year: 1=low academics means a GPA equal or less than 2.00 and 0=high academic means a GPA greater than 2.00.

- School absenteeism was measured by asking how many times the student was absent from school without any reason, and the mean value was used to cut off as 0=low (less than 7 days of absence) and 1=high (equal or more than 7 days of absence).

- School truancy (unexcused absences) assumes values as 0=low and as 1=high (more than two and a half day).

- School retention was measured as 0=no and 1=yes (ever repeated a school grade).

- Parental education was assessed asking participants to report the highest completed level of schooling of their father and mother separately, and the higher of the two was used in the analyses. Descriptions for the possible responses on the variables included: 1=Less than High School, 0=High School or more.

- Parental employment status was measured as 0=for employed parents and 1=for unemployed parents.

- Teenage mother was a single question asking about adolescent's mother's pregnancy during teenage years; it was measured as 0=if the pregnancy was over 20 years old and 1=if the mother's pregnancy was under 20 years old.

- Friends' drug use was measured asking the participant if he/she has a friend or friends who use of illicit drugs, with values 0=no and 1=yes.

- Friend's dropout of school was assigned values of 0=no and 1=yes.

- School environment we used a question asking if a teacher was attacked or wounded by students and was measured as a dichotomous variable which assumes the values of 0=no and 1=yes.

Data collection

The data collection procedure for this study included a computer-assisted personal interview and a self-

administered questionnaire. The self-administered questionnaire addressed the following behavior variables: use of alcohol and illegal drugs, violent behavior, unlawful activity and sexual behavior. Trained interviewers also collected data of sociodemographics, health status, family relationship, support and school information from parents and youths in their homes. Each subject was separately interviewed. In 96.2% of the cases, the biological mother or female guardian was the primary source of adolescent and parental relationship information.

Analysis

Descriptive analyses were used to estimate the prevalence of dropout. Chi-square test of independence was used to assess the association between school dropout, sociodemographic and risk factors. Multiple logistic regression analysis adjusted for the adolescent's gender, adolescent's age, parental education, and parental employment statuses were performed. All the sociodemographic variables and risk and protective factors were included in the final model. All statistical analyses were completed using SAS 8.1 (SAS Institute, Cary, NC).

Results

During the second follow-up approximately, 6.2% of the adolescents ages 13 to 18 reported having dropped out of school. Bivariate analysis describing the adolescent and family's demographic characteristics is reported on Table 1. The older adolescent age group shows a higher prevalence of dropout ($p < 0.05$). This table also shows that adolescents whose mothers were older than 20 when pregnant and who used drugs during pregnancy were more likely to dropout of school than those adolescents whose mothers were younger than 20 years of age when pregnant and did not use drugs during pregnancy.

Table 2 shows that adolescents with low academic achievement, high school absenteeism, high school grade retention, and with friends who were dropouts were more likely to dropout of school than their peers who did not report these behaviors. This table also shows that sexually active adolescents and adolescents that report pregnancy or fatherhood were more likely to dropout of school.

Table 3 provides the results of a logistic regression analysis. Older adolescents, whose mothers used drugs during pregnancy, who reported high absenteeism from classes, and who had high school grade retention were more likely to dropout of school than their counterparts that did not report these characteristics. This table also demonstrates that adolescents who attend schools where teachers were attacked or wounded by students were

more likely to dropout than adolescents that did not attend to these schools. All interactions performed were not significant in the final model.

Table 1. Percentage of Dropouts by Adolescent and Family Background Characteristics

Characteristics	Total N	Dropout n (%)
Overall	546	34 (6.2)*
Adolescent's Gender		
Male	264	13 (4.9)*
Female	282	21 (7.5)*
Adolescent's Age		
12-13 years	111	3 (2.7)*
14-15 years	343	15 (4.4)*
16+ years	92	16 (17.4)*
Grade Level		
Elementary	90	5 (5.6)*
Intermediate	387	21 (5.4)*
High School	64	8 (11.6)*
Parents Education		
Less than High School	252	14 (5.6)*
High School or more	294	20 (6.8)*
Parent Employment Status		
Unemployed	327	23 (7.0)*
Employed	219	11 (5.0)*
Family Structure		
Single-Parents	383	29 (7.6)*
Both-Parents	149	5 (3.4)*
Age Teen Mother		
Less than 20 years	180	6 (3.3)*
More than 20 years	366	28 (7.6)*
Mother used drugs during pregnancy		
Yes	26	6 (23.1)*
No	517	28 (5.4)*

Chi-square test of independence
*p-value ≤ 0.05

Discussion

This paper is concerned with the adverse consequences of poverty, risky neighborhoods, and family drug and alcohol use on adolescents dropping out of school. According to the Bronfenbrenner's Theoretical model (29), a youth's successful performance in key social environments such as school, will affect the development of later problems (30-32).

Therefore, we examine the impact of a variety of variables in order to understand what factors we need to address so that effective preventive programs can be developed to arrest the dropout rate in the Puerto Rican school system. We found that dropping out of school seems to be a process that provides signs that something is going wrong in youth attachment to school. Specifically, we found that the risk for dropout was significantly related to school absenteeism and grade retention. Grade retention seems to impact a youth's schooling process significantly.

Previous researchers argue that age grading in schools burdens children who fall off the expected timetable of age grade progression by complicating their social integration at school and within their peer network (33). Moreover, many youth dropouts who do not get off to a good start over time are likely to have mounting school problems. Recovery from a shaky beginning is always possible, but by the time this happens much damage might have already been done to the youth's self-concept to be able to continue in the school process.

Teachers and other school staff need to be aware of what is going on in terms of school attachment of students with risky behaviors such as absenteeism and grade retention in order to provide the help needed to prevent school dropouts. Parents are active agents in defining their children's future, and nothing is more related to a child's future than high educational attainment. The fact that a mother's use of drugs during pregnancy was related to dropping out might be a negative active agent for damaging an adolescent's future. However, understanding how these happened needs further research. Is this maternal behavior affecting the cognitive condition of the offspring or is the care provided by a drug-using mother at an early age placing their young offspring in the path of a problematic cognitive development? These are important questions that need to be answered.

Table 2. Percentage of School Dropouts by Related Risk and Protective Factors (n=546)

Factors	Dropout n (%)	
	Low	High
Academic Achievement	17 (10.4)	16(4.3)*
School Absenteeism	13 (3.8)	21 (10.4)*
School-Truancy (Unexcused Absences)	20 (5.1)	14 (9.2)*
Factors	Yes	No
School Retention (Grade Retention)	11 (14.7)	23 (4.9)*
School violence: Teachers Attacked or Wounded by Students	3 (12.5)	31 (5.9)*
Teen Sexually Active	13 (13.7)	17 (4.2)*
Teen Pregnancy/Fatherhood	3 (18.7)	31 (5.8)*
Illicit Drug Use Last Year	2 (15.4)	32 (6.0)*
Friends Dropout School	13 (11.5)	21 (4.9)*
Friends Drug Use	7 (9.7)	27 (5.7)*
Parents Visit the School	13 (5.6)	21 (6.7)*
Parents Studying with Adolescent	14 (7.1)	20 (5.7)*

Chi-square test of independence
*p-value ≤ 0.05

The findings stemming from students who saw teachers attacked and wounded need to be addressed urgently by school authorities. Students might perceive a school with that type of violence as a system with high disorder. Future

research needs to address a more holistic approach towards understanding school violence such as violence between students, destruction of school property by students, and violence from teachers to students. Comprehensive awareness of school violence will help to understand perceived disorder and school dropout in all their elements and complexities. Violence toward teachers is highly dangerous for the health of the school environment. Therefore, school authorities should begin addressing this problem in all its manifestations.

Table 3. Logistic Regression Analysis Predicting School Dropout

Variables	OR	95% C.I.
Adolescent's Age: 16 or more years	6.6	1.37 - 31.67
Mother Used Drug During Pregnancy (Yes)	4.9	1.31 - 17.91
School Absenteeism (High)	4.8	1.63 - 14.13
School Retention/Grade Retention (Yes)	3.7	1.14 - 12.05
School Violence: Teachers Attacked or Wounded by Students (Yes)	7.0	1.44 - 34.17

Note: Logistic regression was adjusted by adolescent's gender and age, parents' education and employment status. Variables included in the model that did not reach statistical significance (p-value > 0.05): Family Structure, Teen Mother, Academic Achievement, School-Truancy, Teen Sexually Active, Teen Pregnancy/Fatherhood, Illicit Drug Use, Friends Dropout School, Friends Drug Use, Parents Studying with Adolescent and Parents Visit the School.

These findings underscore the importance of efforts made to further understand the effects of poverty and its impact on the different elements of environments such as family and school; and how they differ among subgroups of families and children. In particular, the role of risk behaviors of poor parents, even at pregnancy, and their impact on adolescent outcomes is informative but needs to be specific. This will help strengthen educational health programs particularly for pregnant young women, and better welfare reforms and family policies could/should help poor young women experience a healthy pregnancy and care for a healthy offspring in each stage of his/her developmental process.

The present study has several limitations. The data collected was self supported and the results are not generalized to adolescents or parents outside the recruitment areas. Even with these limitations the current study adds to the literature by demonstrating that important contextual influence particularly the role of family and school on adolescents' dropout. Parental risk behaviors such as substance use even during pregnancy and school violence seem to be strong predictors of school dropout among our cohort of adolescents. Among developmentalists a persistent question over the year has been the extents to which "initial conditions" constrain or enhance development. Growing literatures testify to the

long term benefits for disadvantage children attending high quality schools (28). Much less research however contrasts school trajectories and family drug use behaviors in youth who differ in ethnicity and social class such as Hispanic adolescents residing in poor families and embedded in risky environments (34).

The study shows that before adolescents leave school for good, they fade out through chronic disengagement such as grade hold back and attending classes two days out of five. The fact that absences and grade retention were significant associated with dropout in our study cohort suggest that something within or outside our youth is at issue that need to be addressed by teachers, school administrators and educational policy. Grade retention takes children of the normal timetable of grade progression, making repeaters conspicuous and complicating their social integration with classmates a situation that for some adolescents is difficult to cope (33).

Resumen

Objetivo: Esta investigación nos ayuda a entender las circunstancias asociadas con el abandono escolar en un cohorte de adolescentes puertorriqueños. **Métodos:** El estudio recolectó datos de los adolescentes y sus padres. La información relacionada al abandono escolar del adolescente fue obtenida del segundo seguimiento de un año de un estudio longitudinal financiado por NIDA "Familias a Riesgo Inmersas en Ambientes de Riesgo" (Grant No. DA RO1 15301). Para la recolección de datos se utilizaron protocolos de entrevista autoadministrado y cara a cara. La predicción de factores asociados al abandono escolar fue evaluada a través de características del adolescente, el transfondo familiar, experiencias en la escuela y sus conductas. **Resultados:** Durante el segundo seguimiento, dos años después de la evaluación inicial, aproximadamente 6.2% de los adolescentes informó haber abandonado la escuela. El análisis de regresión logística indicó que los adolescentes de más edad (OR=6.6, 1.37-31.67), aquéllos que las madres utilizaron drogas durante el embarazo (OR=4.9, 1.31-17.91), así como los que informaron las tasas más altas de ausentismo a clases (OR=4.8, 1.63-14.13), de retención en un mismo grado (OR=3.7, 1.14-12.05) y que asistían a escuelas donde se reportaron maestros que fueron atacados o heridos por estudiantes (OR=7.0, 1.44-34.17) son más dados al abandono escolar. **Discusión:** Estos resultados acentúan la importancia de los esfuerzos de estudiar aún más los efectos de los diferentes elementos del ambiente que rodean a los adolescentes como la familia y la escuela. Se ha postulado que abandonar la escuela es un proceso cuyas características pueden ser detectadas mucho antes de que

ocurra. El hecho que estudiantes que abandonan la escuela son más dados a informar faltar a clases injustificadamente y retenerse en un mismo grado pueden ser elementos pertinentes en la prevención y la intervención temprana por parte de los maestros y otro personal escolar.

Acknowledgements

This publication was made possible by a grant from the National Institute on Drug Abuse of the National Institute of Health (NIDA Grant Num. RO1 DA15301). Its content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH.

References

1. Dryfoos J. The prevalence of problem behaviors: Implications for program. In: Weissberg RP, Gullotta RL, Hampton RL, Ryan BA, Adams GR, editors. *Enhancing children's wellness*. Thousand Oaks, CA: SAGE, 1997: p. 318.
2. Miller WB, Pasta DJ, MacMurray J, Chiu C, Wu H, Comings DE. Dopamine receptor genes are associated with age at first sexual intercourse. *J Biosoc Sci* 1999;31:43-54.
3. Grunbaum JA, Kann L, Kinchen SA, Williams B, Ross JG, Lowry R, et al. Youth risk behavior surveillance--United States, 2001. *J Sch Health* 2002;72:313-328.
4. Grunbaum JA, Kann L, Kinchen SA, Williams B, Ross JG, Lowry R, et al. Youth risk behavior surveillance--United States, 2001. *MMWR Surveill Summ* 2002;51:1-62.
5. Reyes JC, Robles RR, Colón HM, Negrón J, Matos TD, Calderon J, et al. Neighborhood disorganization, substance use, and violence among adolescents in Puerto Rico. *J Interpers Violence* 2008;23:1499-1512.
6. Robles RR, Matos TD, Reyes JC, Colón HM, Negrón J, Calderón J, et al. Correlates of early sexual activity among Hispanic children in middle adolescence. *P R Health Sci J* 2007;26:119-126.
7. Weist MD, Acosta OM, Youngstrom EA. Predictors of violence exposure among inner-city youth. *J Clin Child Psychol* 2001;30:187-198.
8. McLeod JD, Kaiser K. Childhood Emotional and Behavioral Problems. *Am Sociol Rev* 2004;69:636-658.
9. Reyes J, Moscoso M, Vélez C, Rodríguez F, Colón H, Robles R, et al. Risk and protective factors associated with youth violence among secondary school students in a nationally representative sample in Puerto Rico. *Bol Asoc Med P R* 2004;96:253-260.
10. Harding R, Dockrell MJ, Dockrell J, Corrigan N. Motivational interviewing for HIV risk reduction among gay men in commercial and public sex settings. *AIDS Care* 2001;13:493-501.
11. Mather M. Children in Puerto Rico: Results from the 2000 Census. *United States Census*; 2003.
12. U S Census Bureau. *American Community Survey*; 2007.
13. Edmondson JH, White J. A tutorial and counseling program: Helping students at risk of dropping out of school. *Professional School Counseling* 1998;1:43-48.
14. Alexander C, Piazza M, Mekos D, Valente T. Peers, schools, and adolescent cigarette smoking. *J Adolesc Health* 2001;29:22-30.
15. Gramlich E, Laren D, Sealand N. Moving into and out of poor urban areas. *J Policy Anal Manage* 1992;11:273-287.
16. Alexander KL, Entwisle DR, Horsey C. From first grade forward: Early foundations of high school drop out. *Sociol Educ* 1997;70:87-107.
17. Garnier HE, Stein JA, Jacobs JK. The process of dropping out high school: A 19-years perspective. *Am Educ Res J* 1997;34:395-419.
18. Jessor R. Successful adolescent development among youth in high-risk settings. *Am Psychol* 1993;48:117-126.
19. Finn JD. Withdrawing from school. *Rev Educ Res* 1989;59:117-142.
20. White HR, Labouvie EW, Papadaratsakis V. Changes in substance use during the transition to adulthood: A comparison of college students and their noncollege age peers. *J Drug Issues* 2005;2:281-306.
21. Yeung WJ, Linver MR, Brooks-Gunn J. How money matters for young children's development: parental investment and family processes. *Child Dev* 2002;73:1861-1879.
22. Fothergill KE, Ensminger ME. Childhood and adolescent antecedents of drug and alcohol problems: A longitudinal study. *Drug Alcohol Depend* 2006;82:61-76.
23. Su SS, Hoffman HP, Gerstein DR, Johnson RA. The effect of home environment on adolescent substance use and depressive symptoms. *J Drug Issues* 1997;4:851-878.
24. Entwisle B, Rindfuss RR, Faust K, Kaneda T. Network and context: Variation in the structure of social ties. *Am Sociol Rev* 2007;112:1495-1533.
25. Harding D. Counterfactual models of neighborhood effects: The effect of neighborhood poverty on dropout and teenage pregnancy. *AJS* 2003;109:676-719.
26. Milan S, Ethier K, Lewis J, Kershaw T, Niccolai L, Ickovics J. Cognitions and social context of African-American and Puerto Rican Females. *J Youth Adolesc* 2006;35:959-967.
27. Supple AJ, Ghazarian SR, Frabutt JM, Plunkett SW, Sands T. Contextual influences on Latino adolescent ethnic identity and academic outcomes. *Child Dev* 2006;77:1427-1433.
28. Dufur MJ, Parcel TL, McKune BA. Capital and context: using social capital at home and at school to predict child social adjustment. *J Health Soc Behav* 2008;49:146-161.
29. Bronfenbrenner U. *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press; 1979.
30. Aldous J. Family, ethnicity, and immigrant youths' educational achievements. *J Drug Issues* 2006;27:1633-1667.
31. Roscigno VJ. Family/school inequity and African-American/Hispanic achievement. *Soc Probl* 2000;47:266-290.
32. Weisner C, Delucchi K, Matzger H, Schmidt L. The role of community services and informal support on five-year drinking trajectories of alcohol dependent and problem drinkers. *J Stud Alcohol* 2003;64:862-873.
33. Alexander KL, Entwisle DR, Kabbani NS. The dropout process in life course perspective: Early risk factors at home and school. *Teach Coll Rec* 2001;103:760-822.
34. Kurtines WM, Szapocznik J. Cultural competence in assessing Hispanic youths and families: challenges in the assessment of treatment needs and treatment evaluation for Hispanic drug-abusing adolescents. *NIDA Res Monogr* 1995;156:172-189.