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ABSTRACT

An examination of the characteristics of foreign-born White, Hispanic, and Asian high school dropouts between the ages of 16 and 21 indicates that English language proficiency, age at immigration, and family language background are all related to the likelihood of dropping out. Statistical data were analyzed for a subsample of 519 foreign-born 16- to 20-year-olds drawn from the 1981 Census Public Use Tape, comprised of 197 White, 217 Hispanic, and 105 Asian youth. (Blacks were not included because there were only two foreign-born Blacks in the age range examined). The following summary conclusions are discussed: (1) age and sex were not related to dropping out, but being married at an early age was related to dropping out for the overall group as well as for Hispanics and Asians but not for Whites; (2) educational attainment was related to dropping out for the overall group and especially for Hispanics, nearly 25 percent of whom never started high school; and (3) age at the time of immigration, limited English proficiency, language spoken during childhood, and language currently spoken at home were related to dropping out for the overall group as well as for Whites and Hispanics but not for Asians. The effect of ethnicity combined with family socioeconomic status, while possibly significant, especially for Hispanic students, could not be determined because of lack of data. A list of 40 references and 4 tables of statistical data are appended. (FMW)

High School Drop-Outs Among Foreign-Born Whites, Hispanics, and Asians

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High School Drop-Outs Among Foreign-Born

Whites, Hispanics, and Asians

Studying high school drop-outs among immigrant youth has become increasingly important with the flood of immigration to the U.S. in recent years and the growing representation of Hispanic and Asian immigrants in U.S. schools (Ballantine, 1989). The Census Bureau (1989) reports that approximately 602,000 people immigrated legally to the U.S. in 1987. Forty percent were Asians, 40 percent were Hispanics, and the majority of the rest were from the West. In addition, between 300,000 and 500,000 illegal immigrants enter the U.S. annually (Passel & Woodrow, 1984). The total of these entries is similar to the 879,000 immigrants who arrived in 1910, the peak year for immigration in U.S. history.

Two sets of factors related to immigrant drop-out rates have been examined by previous researchers. The factors contributing to the general problem of high school drop-outs among American youth include race or ethnicity (U.S. Commission on Civil Rights, 1978), gender (Combs & Colley, 1968), marriage at a young age (Howell & Frese, 1982), parent's education and families' incomes (Hill & Stafford, 1977; Lerman, 1972; U.S. Department of Education, 1986), and years of retention (Phelan, 1987; Rumberger, 1983; Soderberg, 1988). Another set of factors include specific problems of linguist minorities, such as fluency in English, language of the family, age at immigration (Gibson, 1987; Inbar, 1976; Jones, 1985; Rumberger, 1983; Steinberg, Blinde, & Chan, 1984), and prejudices against immigrant minorities

(Bowler, Rauch, & Arzer, 1986; Hengeler & Tavormina, 1978; Hinojosa & Miller, 1984; Suarez-Orozco, 1987).

Steinberg, et al. (1984) reviewed the literature on school drop-outs among minorities; they observe that much of the material on linguistic minority children focuses on Hispanics. Little is known about the drop-out problem among Asian youth in the U.S., and still less is known about recent immigrants from the West. Research on the topic is further complicated because immigration status varies.

Demographers use three categories to classify immigrant status: (a) Natives--America-born children with two America-born parents; (b) Children of immigrants--American-born children with one or two foreign-born parent(s); (c) Immigrants--Foreign-born (Shrycock & Siegel,1980). Although some researchers have studied the effect of immigration on school drop-outs, they have failed to separate individuals by immigration status. Children of immigrants and foreign-born children have been lumped as "immigrants" in most studies (Vevdonk, 1982); in other studies all three groups of children have been mixed together as "language minority" students (Steinberg, et al., 1984).

Another approach has been to study the effects of place of birth on high school drop-out rates. McCarthy and Burciago-Valdez (1985) report that foreign-born Hispanics, particularly immigrant Mexican youth, had higher drop-out rates than their native-born fellows, but Valverde (1987) presents opposite findings. However, very few researchers have considered place of birth in such studies.

There have been additional problems in previous studies of drop-outs among immigrants. The results from many studies may not

accurately represent the problem nationwide because the data may be limited to specific localities or to special self-selected groups of students. An overall assessment of the high school drop-out problem among foreign-born youth should be based on national data collected from all or a representative sample of such students. Unfortunately, over the last several decades, accurate data on the immigration status of youth have been scarce; few studies of such students have a national perspective. To address these problems, we have chosen to use U.S. census data (U.S. Bureau of the census, 1981).

Focusing the Sample

To see if there is a distinguishable difference in high school drop-out rates between foreign-born youth and the two native-born groups defined by demographers, we conducted cross-tabulations on our data bank. We also tabulated several drop-out-linked demographic variables frequently mentioned in the literature and available for census data.

Table 1 shows that foreign-born youth not only have much higher drop-out rates than both native groups (29% vs. 17% and 16%) but also differ from natives on many other drop-out-linked items. A higher percentage of immigrant youth marry at an early age (18% vs. 14% and 10%). A lower percentage of immigrant youth reach grade 12 [before dropping out](64% vs. 79% and 80%), and a higher percentage of immigrant youth never start high school (13% vs. 1% and 2%). When we looked at the following four items that relate to immigration, we found a large gap appearing between foreign-born and native-born (with either foreign-born parents or native-born parents). Against the conventional

wisdom, the English problem among the children of immigrants apparently does not exist. Children who were born in the United States, no matter where their parents were born, have no problem in speaking English. Twenty-three percent of foreign-born youth consider themselves as speaking poor English, compared with near zero of native-born youth. Seventy-six percent of foreign-born youth are speaking a language other than English at home, twice as many as children of immigrants and about twenty times as many as children of native parents. An overwhelming majority (83%) of foreign-born youth are from families where a language other than English was spoken when they were children compared with 49 percent of children of immigrants and only six percent of children of natives. About half of the foreign-born youth who came to America were 13 years or older. Table 1 confirms our hypothesis that foreign-born youth not only have higher drop-out rates, but also differ from the native-born in many aspects. Compared with children born abroad, children born in the United States, regardless of where their parents born, are more alike than children born abroad. Therefore, the conclusion from Table 1 is clear: there is a necessity to study foreign-born population separately on high school drop-out behavior.

Statement of the Problem

This paper focuses on the high school drop-out problem among foreign-born youth aged 16 to 21. We are interested in several issues. First we want to know if the factors reported in the literature operate differently across ethnic groups and whether they have influence on high school drop-out for the foreign-born youth. We also want to know the importance of the effects of each factor when we put them together,

and we have a special interest in the effects of those four factors that indicate youth immigration background. Because few previous studies have examined how these immigration-related factors operate on different ethnic groups, we decided to examine the immigration factors and several other demographic factors on the propensity to drop out among white, Hispanic, and Asian immigrant groups. We want to know if a youth's ethnic origin plays an important role in school drop-out behavior, while other factors are taken into consideration.

Three sets of questions are addressed: (a) Is there a difference in drop-out rates and is there a difference in relevant demographic factors among immigrant whites, Asians, and Hispanics? (b) What are the factors related to high school drop-out rates among foreign-born youth and how do they operate differently on school drop-out behavior for whites, Asians, and Hispanics? (c) Among all the relevant factors which contribute the most to dropping out of school, and how do those factors predicting high school drop-out probability for all foreign born vary across race and ethnic groups?

Sample and Methods

Sample

Analyses are based on data from the U.S. Census Public Use Tape (U.S. Bureau of the Census, 1981). They were derived from an interview survey of a representative sample of 160,225 Americans, or about 0.1 percent of the U.S. population over age 13. Only persons who were aged 16-21 in November 1979 are included in these analyses. The 14,564 persons aged 16-21 include 519 foreign-born youth who comprise the subjects of this study: 197 non-Hispanic whites, 217 Hispanics, and 105

Asians. Blacks are not included in this study because there are only two foreign-born African blacks in the age range examined. Children born overseas of U.S. citizens are also excluded from this study.

However we should recognize that we are reducing variance by placing our subjects into three relatively simple groups: white, Hispanic, and Asian. The real situation is surely more complicated. Whites can come from any part of the world, by any nationality. Many researchers (e.g., Barringer, Takeuchi, & Xenos, 1990; Suarez-Orozco, 1987) have argued that Asian-Americans as well as Hispanics have such diverse backgrounds that they should not be treated as a single group. Unfortunately, sample size in this tape was not large enough to provide reliable estimates for each subgroup, therefore the generalizations from this study are not necessarily true for every subgroup in a large category.

Data

The census tape has data on many personal characteristics such as age, sex, race/ethnicity, marital status, and educational attainment. Specific items include language, country of birth of the respondent and both parents, year of immigration, language respondent currently speaks at home, and language spoken at home during childhood. Unfortunately, the tape does not contain data on parental educational status or on family income. Therefore, two very important factors cannot be studied in this paper.

Ten variables are used in this paper to explore the high school drop-out problem. The criterion variable is the high school drop-out. A high school drop-out is defined as a person who is not a high school

graduate and who was not in school during November 1979. We titled this paper as a study of high school drop-outs, because the large majority of the subjects in this study did reach high school, though 13 percent of the immigrant youth never started high school (see Table 1).

High school graduates and drop-outs are compared on nine independent variables: age, sex, race/ethnicity, marital status, highest grade ever attended, and four immigration-related demographic variables: ability to speak English, language other than English being spoken at home, language other than English spoken at home during childhood, age at immigration. Those nine variables were selected because they were frequently reported in the literature as high school drop-out-related factors.

Census survey employed a self-reporting measure in which respondents are asked questions with a series of previously categorized answers provided.

Modeling the determinants of drop-out behavior is complicated by the need to decide strict causality. It is particularly troublesome if the cause factors occur around the same time as the act of dropping out, or after the act of dropping out; or worse, if it is impossible to know the exact time of occurrence. Some of the demographic factors we studied, such as marital status and highest grade ever attended, might be symptoms, rather than causes of drop-out behavior.

We know the respondents' marital status when this survey was conducted. Something we do not know is whether they married before or after they dropped out from school. The same difficulty occurs for studying the relationship between highest grade ever attended and

dropping out. Highest grade ever attended can be a measure of retention if we use an age-grade modal (U.S. Bureau of Census, 1973) According to the age-grade modal, norm grade for a 17-21-year-old is 12th grade and for a 16-year-old is 11th grade. Because the census survey does not provide us information about when a person dropped out from school, it is possible that the immigrant youth were retained in school before they dropped out, or they could have dropped out from school at an early age so they never reached the modal grade set for their age. It is also possible that they were retained in school and also dropped out before they reached age 16. As reported in Table 1, 13% of immigrant youth never went to high school, including a few who never went to any school at all; in those cases we cannot say that they dropped out because of retention.

Statistical methods

Two types of analyses were carried out to address the research questions. The first, which is descriptive in nature, with chi-square tests applied, examined the relationship between eight demographic variables, the drop-out, and ethnicity. Then we further examined the relationship between each of the nine variables and high school drop-out across various racial/ethnic groups. Finally we take the four immigration-related variables into consideration simultaneously to set two conditions: disadvantaged condition and nondisadvantaged condition. We compare the means of drop-out rates of immigrant youth who fell into each of those two categories across ethnicity. The results of those analyses are shown in Tables 2 and 3.

The chi-square tests provide some indications of the possible predictive power of individual demographic variables. One difficulty in interpreting these results is that some of these predictors may be intercorrelated, and thus, each individual relationship between a predictor and the criterion variable may be confounded by the "effects" of other predictor variables. It is unclear from examination of a single chi-square which variables are really important in predicting the criterion. One solution to this problem is to use logistic regression analysis to determine the unique contribution of each predictor after all other predictors are considered.

The second analysis employs logistic regression techniques to answer the following question--which of the variables are most important in predicting high school drop-outs and whether one or a few particular factors affect the high school drop-out problem of each ethnic group in a similar or dissimilar manner. Logistic regressions were performed with those variables identified in the descriptive analysis. No interaction terms were included. Besides a regression performed for all 519 foreign-born, three additional logistic regressions were run separately within racial/ethnic groups to determine whether the predictors of drop-out are the same for whites, Asians, and Hispanics as for the total. However, because of the previously discussed difficulty in interpretating the data on marital status and highest grade attended, we excluded these two variables from our regression analysis.

Logistic techniques permit multivariate analyses with dichotomous dependent variable that represents the likelihood (probability) of

dropping out of high school (Aldrich & Nelson, 1989; Hanushek & Jackson, 1977). The estimated coefficients and tests of significance for both models appear in Table 4, Reporting the results based on those independent variables that exhibit significant effects on the probability of dropping out.

In one respect the effects of the independent variables from logit estimates can be interpreted in the same way as from OLS estimates: In each case the sign of the coefficient indicates a positive or negative effect from the corresponding independent variable, and the t-value indicates whether the effect is significant. The size of the logistic regression coefficients also indicate the relative importance of these predictor variables. But the magnitude of the effect, unlike OLS, depends on the values of the other independent variables, since a logit model assumes a nonlinear functional form.

Results

It is not surprising that drop-out rates are significantly different for white, Hispanic, and Asian immigrants. Table 2 shows that the rates were as low as 13 percent for foreign-born Asians and as high as 49 percent for foreign-born Hispanics. The rate for whites is 15 percent.

Descriptive statistics in Table 2 also show significant ethnic differences in seven of the eight demographic factors. There is no significant ethnic differences in age distribution. The varied drop-out rate among those three ethnic groups may be partially explained by the different demographic characteristics. There are more males than females among foreign-born whites and Hispanics, but Asians reverse the

gender pattern. Hispanic youth are more likely to be married than either whites or Asians (22% vs. 16% and 12%). They are also less likely to reach 12th grade than either whites and Asians (46% vs. 81% and 68%). Twenty-four percent of Hispanic immigrant youth of age 16-21 never reach high school, compared with 6% white immigrant youth and 4% Asian immigrant youth. Whites are more likely from a family where English was the only language spoken when they were children (31%), they are more likely to speak only English at home (45%), and they are more likely to speak good English (90%). One possible explanation for this is a higher percentage of white immigrants come from English-speaking countries than either Hispanics or Asians. Contrasting with whites, about 95 percent of Hispanic youth are from a family where a foreign language was spoken when they were children. Hispanics are about four times more likely to report themselves speaking poor English as whites and twice as likely as Asians. Ninety-four percent of the Hispanic foreign-born youth reported that they were speaking a foreign language at home at the time of the census survey. Asian children are least likely to get married at a early age (12%), they came to the U.S generally later than either their white or Hispanic counterparts. Over 60 percent of foreign-born Asians arrived in the U.S. at age 13 or older. Asian youth (19%) reported less of a problem with English than Hispanics (37%) but more than whites (10%). Although a foreign language was spoken in 89 percent of Asian foreign-born youths' homes when they were children, only 79 percent of those Asian youths speak that foreign language at the time the census survey was conducted.

We first provide an explanation of how to read Table 3. As an example: of 91 youth in the sample of 519 foreign-born youth, 46 dropped out for a percentage of 51% ; of 428 youth who were married, 104 dropped out for a percentage of 24%; the difference between the 24% and 51% was significant when tested by Chi square. The remainder of the table is read similarly.

The results of the descriptive statistics with chi-square test in Table 3 show that for total foreign-born, all of the independent variables, except age and sex (not reported in Table 3), were significantly related to high school drop-out rates. Immigrant youths may be disadvantaged in their probability to graduate from high school if they fall into any of the following conditions: being married, not reaching grade 12, arriving in America at an older age, speaking poor English, being from a foreign-language-speaking family.

Putting ethnicity aside, married youth are twice as likely to drop out from school than unmarried students. Persons who attended 12th grade are nine times less likely to drop out from school than persons who attended grades 9 to 11. It rises to 16 times for those who never reached high school. All four immigration variables are significantly related to high school drop-out. Youth who speak poor English or no English are about four times more likely to leave school than youth who speak English well. Persons with a language other than English spoken at home when they were children as well as persons speaking a foreign language at home at the time of the census interview are also four times more likely to drop out of school than persons whose home language is English or persons speaking only English. Persons who came

to the United States at age of 7-12 are twice as likely to drop out from school than persons arriving in the U.S. at the age of six or younger. There is another ten percent increase on drop-out rates if a person came to the United States at 13 years or older.

The results of the descriptive statistics with chi-square test in Table 3 also show that six independent variables were significantly related to high school drop-out rates for total foreign-born youth, although the results vary for ethnic groups. Highest grade ever attended is the only variable that has a significant effect on high school drop-out rates for all three ethnic groups. Being married does not have a significant relation with drop-out rates for whites, but it is significant for Hispanics and Asians. For whites all four immigration-related variables are correlated to their high school drop-out problem. They are also significant for Hispanics, except the variable indicating whether a foreign language was spoken at home during childhood. When the chi-squares are conducted separately, for Asian youth none of the four immigration variables is significantly related to their high school drop-out problem--one of the most revealing findings from this study. It is noteworthy that the age at immigration operates differently on drop-out rates for different ethnic groups. For Hispanics, there is a trend for a stable increase of drop-out rates with the growth of age of immigration. For whites, the trend is a curve. Youth who arrived in America between the ages of 7 and 12 have the highest drop-out rates (22%), and children who came to the U.S. after the age of 12 had slightly lower drop-out rates than children who immigrated to the U.S. at age six or younger (12% vs.

14%). For Asians, coming to America before 7 years old is critical, but there is little difference after that age (0% vs. 15% & 16%), although the chi-square test is insignificant.

Four comparisons were carried out from data reported in Table 3. Comparison 1 deals with the drop-out rates of those disadvantaged by any of the six items (e.g., drop-out rates for those who were married). Comparison 2 deal with the drop-out rates of those who were not disadvantaged. Comparison 3, across ethnic groups, examines the ratio of disadvantaged drop-out rates to those nondisadvantaged within a ethnic group. Comparison 4 conducts across ethnicity comparisons on group means of the drop-out probability under two conditions defined by the combination of the four immigration-related variables.

In Comparison 1, we are holding each of the demographic variables constant; then we examine how the drop-out rates for the youth who are disadvantaged by each item vary by ethnicity. For all items, Hispanics have the highest drop-out rates and Asians have the lowest drop-out rates, except for marital status. Married white youth are least likely to drop out. Seventy-two percent of married Hispanic immigrant youth drop out from school, compared with forty-six percent of Asians but only 19 percent of whites. Marital status seems to have more impact on Asians' drop-out rates than any of the other groups: Married Asian immigrants are nine times likelier to drop out from school than unmarried Asian immigrants. The ratio for Hispanic is less than two, and it becomes less than 1.3 for whites. In spite of the moderate demographic difference on drop-out rates between whites and Asians, the major differences are between Asians and Hispanics. Of those persons

who never reached the 12th grade, 35 percent of the Asians, 44 percent of the whites, but 79 percent of the Hispanics become school drop-outs. Although Asians have a higher percentage of youth not reaching the 12th grade than whites, they have lower drop-out rates. Retained Asians appear to be more persistent in staying in school than retained youth from other ethnic groups. For people who speak English poorly or speak no English, Hispanic youth are four times more likely to drop out than Asians (86% vs.20%). Hispanics with a language other than English spoken at home when they were children are nearly 3.5 times more likely to drop out from school than Asians from similar family backgrounds (50% vs.15%). Around 66 percent of Hispanics who arrived in the U.S. at age of 13 or older become high school drop-outs compared with 16 percent of Asians and 12 percent of whites.

Comparison 2 examined the drop-out rates of immigrant youth who were not disadvantaged for each of the six items across the ethnic groups. We assumed that a very high drop-out rate among Hispanic immigrants might be a result of the demographic disadvantages reported in Table 2, but results in Table 3 show that assumption to be only partly true. Among unmarried youth, Hispanics were four times likelier to drop out from school than Asians and three times likelier to drop out than whites. For youth who reached 12th grade, Hispanics have the highest drop-out rates (7% vs. 5% for whites and 2% for Asians). Among youth who identified themselves as speaking good English, Hispanics are still twice as likely to drop out from school than either Asians or whites. For the youths who came from families speaking only English when they were children, none of the Asian, 6 percent of whites, and 27

percent of the Hispanics drop out. Hispanic youth who speak only English at home are also three times likelier to be drop-outs than either whites or Asians under the same condition. Twenty-two percent of Hispanics, 14 percent of whites, but none of the Asians who arrived in the U.S. at age six or younger drop out from high school.

We looked further at the statistics concerning comparisons of Hispanic youth without disadvantages and non-Hispanic youth with disadvantages. Of particular interest in Table 3 are the data concerning comparisons of Hispanics and Asians, because both of them are minorities and most of them have a non-English mother tongue. Our finding shows that Hispanic youth who came from an English-speaking family when they were children are likelier to drop out than either Asians or whites who came from a bilingual or multilingual family (27% vs. 15% and 19%). Hispanic youth who reported speaking good English are more likely to drop out than Asians who reported speaking poor English or no English at all (27% vs. 20%). Hispanic youth who reported speaking only English at home have higher drop-out rates than Asians who reported speaking a foreign language (21% vs. 16%), and Hispanics who arrived in America at age six or younger are likelier to drop out of school than Asians who arrived in America at age 13 or older (22% vs. 15%). It is evident that Hispanic youth have the highest drop-out rate among all foreign-born, with or without disadvantages.

In Comparison 3, we derive the drop-out ratio of disadvantaged youth to nondisadvantaged youth within each ethnic group; then we can compare the ratio across ethnic groups for each item. A revealing

finding emerges: Asians and whites seem to be hampered more than Hispanics by many items. Married Asian youth are five times likelier to drop out from school than unmarried Asians. The ratio for Hispanics is less than two. Fourteen of the 93 Asians who came from a family where a foreign language was spoken when they were children dropped out of school, but none of the 12 Asians who came from English-speaking families dropped out. Of the 90 Asians who immigrated to the U.S. at age 7 or older, 20 dropped out, but none of the 15 Asians who came before their seventh birthday dropped out of school. This pattern contrasts vividly with that of whites and Hispanics. No conclusion yet can be made before we examine the means of the drop-out probability for each of the three ethnic groups.

Comparison 4 (see the bottom of Table 3) confirms suggestions from Comparison 3. We first derive the drop-out probability under two sets of conditions classified by the combination of the four immigration-related independent variables: Persons under the first set of condition are foreign-born youth who came to the United States at the age of 12 or younger, who consider themselves to be good English speakers, who do not speak a language other than English at home, and who were raised in homes where no foreign language was spoken. In short, this is a group of youth who are not from disadvantaged immigrant backgrounds. Obviously this is not a common situation among immigrant youth, particularly not among Hispanics and Asians. Table 4 shows that only 11 percent of the total immigrant youth fell into this category. Twenty-two percent of whites, 7 percent of Asians, but only 2 percent of Hispanics are in this group. Persons under the second

condition are foreign-born youth who came to the United States at the age of 13 or older, who consider themselves speaking poor English, who spoke a foreign language at home at the time of the census interview, and who come from families where a foreign language was spoken when they were children. This situation is more common among immigrant youth, and particularly typical among Hispanics and Asians. Although 20 percent of all immigrant youth fall into the immigration-related disadvantaged group, only 8 percent of the whites, 18 percent of Asians, and 32 percent of Hispanics fall into this category. (Percentage of Group 1 and Group 2 for total persons add to 74 percent, not 100 percent, because about 26 percent of the total person do not fall into either group. There is a similar situation for white, Hispanic and Asian.)

Two points can be made from Comparison 4. First, when effects of the four immigration variables are taken into account simultaneously, it is obvious that youth, whatever their ethnicity, are hindered if they have disadvantaged immigration backgrounds. The drop-out percentage for total immigrant youth without those disadvantages is much lower than the national average for native-born children (7% vs. 17% and 16%--see Table 1). The figure for whites is 7 percent and zero percent for Asian immigrant youth without those disadvantaged backgrounds. The drop-out rate for Hispanic immigrant youth without disadvantages is 20 percent, not much higher than the national average. Among immigrant youth who have disadvantaged immigration backgrounds, the drop-out rates increase very sharply. The drop-out rates for these three ethnic groups are all higher than national average for native-

born youth. Second, the drop-out ratio of disadvantaged youth to nondisadvantaged youth shows how much these youngsters are hampered by their immigration status. It seems that Asian youngsters suffer more from immigration-related disadvantages than either whites or Hispanics. Not a single person in group 1 dropped out from school, 21 percent of Asians in group 2 dropped out from school. Interestingly, whites share similar ratios with Hispanics: white youth or Hispanic youth who come from disadvantaged immigration backgrounds are four times likelier to drop out of school than their fellows without this disadvantaged background.

The logistic model for the total population of immigrants comprises only five independent variables: ethnicity and four immigration-related variables. Marital status and highest grade attended were not included because of the aforementioned difficulties involved in interpretation. Age and sex were found to be unrelated to high school drop-out rates in chi-square tests (see Table 3). The logistic regression for total foreign-born youth verifies the findings in Table 3: Ethnicity is an important variable contributing to the likelihood of dropping out when four of the immigration variables are held constant. Hispanic origin significantly increases the probability of dropping out from school. On the contrary, Asian origin has a significantly decreases the probability of dropping out school, although it is only marginally significant. Only one of the four immigration-related variables--ability to speak English--contributes significantly to the drop-out probability. There were no significant

effects of the other three variables on drop-out probability for total immigrant youth.

When we separated youth by ethnic origin, we found that the contributing variables do not change much. Ability to speak English and age at immigration have significant impacts on both white and Hispanics. For both white and Hispanic immigrants, speaking poor English increases the probability of dropping out. The logistic regression coefficients in Table 4 further reveal that, after control of the three other immigration-related variables, the magnitude of effects of the ability to speak English on drop-out probability was very similar for total, whites, and Hispanics. White children who came to the U.S. when they were older actually had less chance to be school drop-outs. In contrast to white children, Hispanic immigrants who came to the U.S. when they were older were likelier to drop out from high school, although this variable is only marginally significant. Speaking a language other than English at home marginally increases the chance of dropping out for white immigrants but not for Hispanics and Asians. For Asians none of the four immigration variables has a significant effect on school drop-out, and the probability level shows that the regression model does not fit. Stepwise elimination of the five independent variables for the total and four independent variables for the separate ethnic groups did not appreciably alter the results.

Summary and Conclusion

This study provides important information of the characteristics and attributes of potential high school drop-outs, and provides indicators to help identify potential high-risk students among white,

Asian and Hispanic immigrant youth. In this final section, we summarize the evidence presented thus far, conclude the relationships and causes of dropping out from school among foreign-born youth, discuss them briefly, and suggest directions for further research on this topic.

1. Our data indicate that age and sex were not related to the high school drop-out rate among immigrant youth. Being married at an early age was strongly related to the drop-out problem for total immigrant youth as well as for Asians and Hispanics. The relationship is particularly strong for the foreign-born Asians, but it is not significant for whites.

2. Educational attainment is also significantly related to the drop-out problem. A very high percentage of drop-outs among foreign-born youth left school before reached the 12th grade. Although this situation is true for all three ethnic groups, it is particularly true for Hispanics. For Hispanic foreign-born youth, the problem is not merely the high school. Nearly a quarter of Hispanic immigrant youth never started high school. It is likely that educational attainment results from a combination of English difficulties, family language background, marital status, and possibly socioeconomic background.

3. Our data indicated that when we examine the four immigration related variables separately, they are generally significantly related to the high school drop-out problem among total immigrant youth, whites and Hispanics. Those who arrived in America at an older age, came from a family where a foreign language was spoken during childhood, speak a foreign language at home at present time, and speak

poor English, are much more likely to drop out from school than children who are not in those categories.

One of the most interesting finds in this paper is that even though there are some visible effects of the above four immigration related variables on the high school drop-out rate among Asian immigrant youth, those effects are statistically insignificant. It is evident in the chi-square tests as well as in the results of the test on the logistic regression coefficients and fitness of model. Our findings are in agreement with others. Wong (1985) reported that despite some initial language difficulties and low academic placement in the transitional period, many Asian students strive for high educational goals resulting in considerable academic accomplishments. We may conclude that for many Asian students, the quest for academic achievement is supported not by linguistic competence alone, but by other important variables.

Logistic regression for the total, whites and Hispanics, shows that the most uniform predictor for the total and for the three ethnic groups is the ability to speak English. We found that the individual's own language usage (ability to speak English) has a far more powerful impact on his or her high school completion than does the pattern of language usage characteristic of the individual's family (a foreign language spoken at home during childhood). This result agreed with Rumberger's study (1983).

The logistic regression coefficient indicates a significant effect of age at immigration on high school completion for both whites and Hispanics. Those findings are in agreement with the results from

Rumberger's study (1983). For Hispanic foreign-born, the age at immigration increase the probability to drop out from school. Although the immigration at an early age tends to increase the drop-out rate for foreign-born whites, as shown by regression coefficient, the cross-tabulation further shows that white youth who arrived in America between ages 7 and 13 have higher drop-out rates than youth who immigrated before 7 or after 13. Inbar's (1976) theory of "vulnerable age" may explain this phenomenon.

After control of a person's age of immigration and ability to speak English, whether a foreign language spoken at home became not significant, and the factor-speaking a foreign language at home at the time of census interview, is not universally related to high school completion; this factor is only important for whites. Children whose school and home environment demand different languages may find themselves at a distinct disadvantage relative to their peers whose school and home settings place more consistent demands on them (Steinberg, et al., 1984). For white, this factor may indicate a person's British origin. As Neidert and Fairly (1985) reported, foreign-born British are particularly doing well. They not only did better on educational attainment than other European immigrants but also did better than American-born British.

4. Based on our data, it is a challenge to interpret the contribution of ethnicity to the effects of selected demographic variables on drop-out behavior. First, we speculate that missing information about family socioeconomic status of Hispanic youth in our study may possibly explain the high drop-out rate for Hispanic youth

without disadvantaged immigration background. The socioeconomic status combine with the effects of demographic and immigration variables could further explain the increased drop-out rates for Hispanic youth from disadvantaged immigration background.

Comparison 4 (comparing immigrant youth from highly disadvantaged backgrounds with those from more favorable backgrounds) shows that white immigrant youth could be hampered by disadvantages of their immigration situation as much as Hispanics. Although white immigrants generally did better than Hispanic youth, Table 3 shows their education still suffered dramatically if they were from a background similar to disadvantaged Hispanic immigrants.

The very low drop-out rates associated with Asian immigrant youth may suggest that minority status and non-English immigrant background do not necessarily decrease the possibility to graduate from school. We are in a dilemma to explain the evidence - on the one hand we found the insignificance in the chi-square tests and logistic regression on those four immigration-related variables, while on other hand we see the combined effects of four immigration related variables increases the drop-out rates from 0 to 21 percent (see Comparison 4). We speculated that the socioeconomic influence may not only increase drop-out rates independently, it may also interact with English ability, family language background and age at immigration; together they aggravate the drop-out problem. There are sources in the literatures which reported a strong correlation between socioeconomic status and language proficiency; Although the direct effects of family language background and age at immigration on the drop-out problem were reported

in previous literature, it is possible that they may be all correlated with the factor of ability to speak English and therefore affect the drop-out behavior indirectly. The high school achievement of Hispanic students is affected negatively by the frequency of oral use of Spanish at home, but the presence of other intervening variables, such as low educational level of parents and recent immigration to the United States, tends to cloud these results (Duran, 1983).

Our data does not allow us to go any farther to speculate on the effects on the drop-out rate which may be derived from culture conflict, value on education, family structure or other ethnic characteristics (Ericson, 1984; Gibson, 1987; Ogbu, 1987). The effect of ethnicity on drop-out behavior may be combined with the effect of socioeconomic status and other demographic and immigration factors which are not included in this study. The lower drop-out rate of Asians may be a result of the fact that Asian immigrant youths have come disproportionnately from educated middle class background (Gardner, Robey, & Smith 1985; Lee & Rong, 1988). However, without examining socioeconomic status, ethnicity, and immigration related factors simultaneously, no such a conclusion can be made.

Implication:

It is evident that immigrant youth, in general, drop out from school at a higher rate than non-immigrant youth. For those immigrants who dropped out from school, it is not just because they were born abroad; instead, they dropped out from school because they have some disadvantaged immigration background. English efficiency, age at immigration, and family language background are all related to their

high drop-out probability. The percentage of school drop-outs among Hispanic immigrants is particularly high. About half of Hispanic foreign-born aged 16-21 were high school drop outs in November, 1979. Special help to promote their English speaking ability and cultural adjustment are indeed needed, not only because they possess the largest percent from non-English speaking background and highest percentage speaking poor English, but also they have the largest proportion from low income family (U.S Bureau of Census, 1983). The combination of both disadvantages could result in retention in school followed by dropping-out (Steinberg et al., 1984).

The drop-out problems among White and Asian immigrant youth have received little attention among educators and policy makers, simply because youth in those two groups have lower drop-out rates, compared with other groups. Results in this study show that there is still a great variation in drop-out rates among these youth. White and Asian immigrant youth as well as Hispanics were hampered by their disadvantaged background. Many researchers reported that a high percentage of Asian immigrant youth from non-English speaking background with low socioeconomic families had been retained in school and dropped out because their language needs were not met; there were not enough school psychologists to help them adjust to the American education system (Bowler, Ranch & Schwavzer, 1986; Condon & Friedenberg, 1988). Those kinds of help are particularly important to Asian immigrants because they have the highest percent of youth coming to the U.S. at an older age. It is not a sound policy to ignore some youngsters' urgent needs simply because, as put by many Asian

educators, such as Wei (1987), Peng, Owings and Petters (1984) and Hsia(1988), other members of the same ethnic group are doing relatively well in U.S. schools.

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Table 1

High school drop-out rates, and selected demographic variables by immigration status for all persons 16-21 years old[a], U.S.A, 1980

	American-born Youth with two American-born Parents[b]	American-born youth with foreign-born parent(s)	Foreign-born youth[c]
Proportion of the population by Immigration status*			
	90 % (13124/14564)	6 % (919/14564)	4 % (521/14564)
High school drop-out rates*			
	17 % (2187/13124)	16 % (145/919)	29 % 9150/521)
Gender			
Male	48 % (6327/1324)	50 % (461/919)	52 % (269/521)
Female	52 % (6797/13124)	50 % (458/919)	48 % (252/521)
Percent married*			
	14 % (1773/13124)	10 % (96/919)	18 % (91/521)
Highest grade ever attended*			
12th or higher	79 % (10393/13124)	80 % (737/919)	64 % (333/521)
9th-11th	20 % (2559/13124)	18 % (165/919)	234 % (119/521)
Never in high school	1 % (172/13124)	2 % (17/919)	13 % (69/521)
A language other than English spoken at home*			
	4 % (475/13124)	35 % (321/919)	76 % (395/521)
Reported speaking poor English*			
	0 % (20/13124)	0 % (4/919)	23 % (120/521)
A language other than English spoken at home during childhood*			
	6 % (804/13124)	49 % (451/919)	83 % (434/521)
Age of arrival of America			
0-6 years old	NA	NA	27 % (140/521)
7-12 years old	NA	NA	27 % (140/521)
13 or older	NA	NA	46 % (241/521)

Note. Based on data assembled from the U.S. Bureau of the Census (1981).
[a]Including white, Hispanics, African American, Asians, and all others.
[b]Including foreign-born children of American-born parents.
[c]There are 197 whites, 217 Hispanics, 2 African Americans, and 105 Asians.
*Significant level for Chi-Square to test the difference of demographic variables by immigration status at P<=.05.

Table 2

High school dropout rates and selected demographic variables by ethnic groups for foreign-born youth 16-21 years old, U.S.A, 1980

	Whites N=197	Hispanics N=217	Asians N=105
Dropout rates**			
	15% (30)	49% (106)	13% (14)
Age			
Ages 16-17	29% (58)	27% (59)	34% (36)
Ages 18-19	33% (65)	35% (76)	31% (32)
Age 20-21	38% (74)	38% (82)	35% (37)
Gender**			
Male	52% (103)	57% (123)	40% (42)
Female	48% (94)	43% (94)	60% (63)
Youth who were married*			
Yes	16% (31)	22% (47)	12% (13)
No	84% (166)	78% (170)	88% (92)
Highest grade ever attended *			
12th & over	81% (160)	46% (100)	68% (71)
9th-11th	13% (25)	25% (64)	29% (30)
0-8th	6% (12)	24% (53)	4% (4)
A language other than English spoken at home**			
Yes	55% (109)	94% (203)	79% (83)
No	45% (88)	6% (14)	21% (22)
Ability to speak English**			
Poor	10% (20)	37% (80)	19% (20)
Well	90% (177)	63% (137)	81% (85)
A language other than English spoken at home during childhood*			
Yes	69% (135)	95% (206)	89% (93)
No	31% (62)	5% (11)	11% (12)
Age of arrival of America**			
Ages 0-6	38% (74)	23% (50)	14% (15)
Ages 7-12	25% (50)	29% (63)	26% (27)
Ages >12	37% (73)	48% (104)	60% (63)

Note. Based on data assembled from the U.S. Bureau of the Census (1981).
**Significant level for Chi-Square to test the difference of selected demographic variables by ethnicity at P<=.05.
*Significant level for Chi-Square to test the difference of selected demographic variables by ethnicity at P>.05 and <=.10.

Table 3

High school drop-out rates and high school selected demographic variables by ethnic groups for foreign-born youth of 16-21 years old, U.S.A, 1980

	Total N=519	Whites N=197	Hispanics N=217	Asians N=105
Youth who were married				
Yes	*51% (46/91)	19% (6/31)	*72% (34/47)	*46% (6/13)
No	24% (104/428)	14% (24/166)	42% (72/170)	9% (8/92)
Respondent speaking a language other than English at home				
Yes	*35% (140/395)	*22% (24/109)	*51% (103/203)	16% (13/83)
NO	8% (10/124)	7% (6/88)	21% (3/14)	5% (1/22)
Spoken English Proficiency				
Poor	*68% (82/120)	*45% (9/20)	*86% (69/80)	20% (4/20)
Well	17% (68/399)	12% (21/177)	27% (37/137)	12% (10/85)
A language other than English spoken at home during childhood				
Yes	*33% (143/434)	*19% (26/135)	50% (103/206)	15% (14/93)
No	8% (7/85)	6% (4/62)	27% (3/11)	0% (0/12)
Age of arrival of America				
Ages 0-6	*15% (21/139)	*14% (11/74)	*22% (11/50)	0% (0/15)
Ages 7-12	29% (41/140)	22% (11/50)	41% (26/63)	15% (4/27)
Ages >12	37% (88/240)	12% (9/73)	66% (69/104)	16% (16/63)
Highest grade ever attended				
12th or higher	* 6% (19/331)	* 5% (8/160)	*8% (8/100)	* 3% (2/71)
9th-11th	53% (63/119)	36% (9/25)	70% (45/64)	30% (9/30)
0-8th	99% (68/69)	100% (12/12)	100% (53/53)	75% (3/4)
Means of the drop-out probability				
Group 1[a]	7% (4/56)	7% (3/44)	20% (1/5)	0% (0/7)
Group 2[bc]	67% (69/103)	33% (5/15)	87% (60/69)	21% (4/19)

Note. Based on data assembled from the U.S. Bureau of the Census (1981).
[a]For youth who immigrated to U.S. at age 12 or younger, from English only family and speak good English.
[b]For youth who immigrated to U.S. at age 13 or older, from non-English speaking family and speak poor English.
[c]Group 1 and Group 2 do not add to 100% (519) because they represent only the extreme situations; the others were not included.
*Significant level for Chi-Square to test the difference of selected demographic variables on dropout rates at p<=.05.

Table 4

Logistic regression predicting high school drop-outs[a] by ethnicity and immigration-related variables for the foreign-born youth of 16-21 years old, 1980

	Total	White	Hispanic	Asian
Intercept	** -3.55	** -3.08	** -2.77	-10.25
White Vs. Hispanic[b]	**1.07			
White Vs. Asians[c]	*-.60			
Speaking a foreign[d] language at home	0.27	*1.20	0.44	-0.08
Ability to speak English[e]	**1.06	**1.09	**1.16	0.40
A foreign Language spoken[f] at home during childhood	0.17	0.13	-0.43	g
Age of Arrival	-0.01	**-0.13	*0.03	0.078
N	519	197	217	105
Chi-Square	170.67	23.74	83.99	7.32
Probability	0.00001	0.0001	0.00001	0.12

Note. Source: U.S. Bureau of Census (1981) Current Population Survey: Public Use Tape File. There are 519 foreign-born youths among 14564 16-21 years old which were drawn from a national sample of 160,255.

[a]Coded 0=Not high school drop-out coded, 1=high school drop-out;

[b]Coded 1=Hispanic 0=other;

[c]Coded 1=Asian 0=other;

[d]Respondent speaking a language other than English at home at the time of interview: Coded 1=yes 0=no;

[e]Speaking English: Coded 1=very well, 2=well, 3=not well,4=not at all;

[f]A language other than English spoken at home when respondent was a child: Coded 1=yes 0=no;

[g]There is no variation of drop-out rates among Youth who speak only English at home. Therefore the logistic coefficient becomes infinite.

** Significant at P<=.05 level.

* Significant at P>.05 and P<=.10.